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OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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GRAND RAPIDS, MICH., NOVEMBER, 1922

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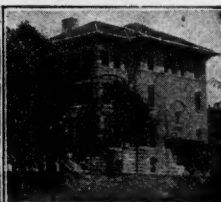
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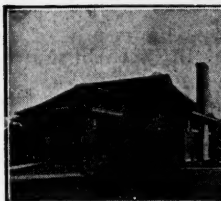
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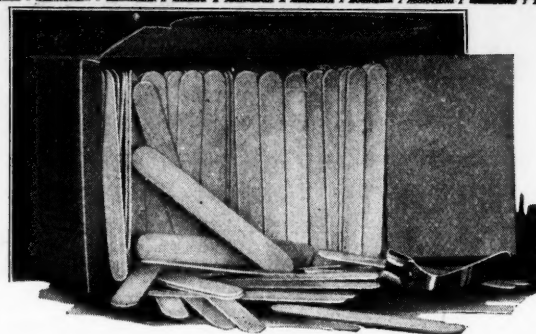
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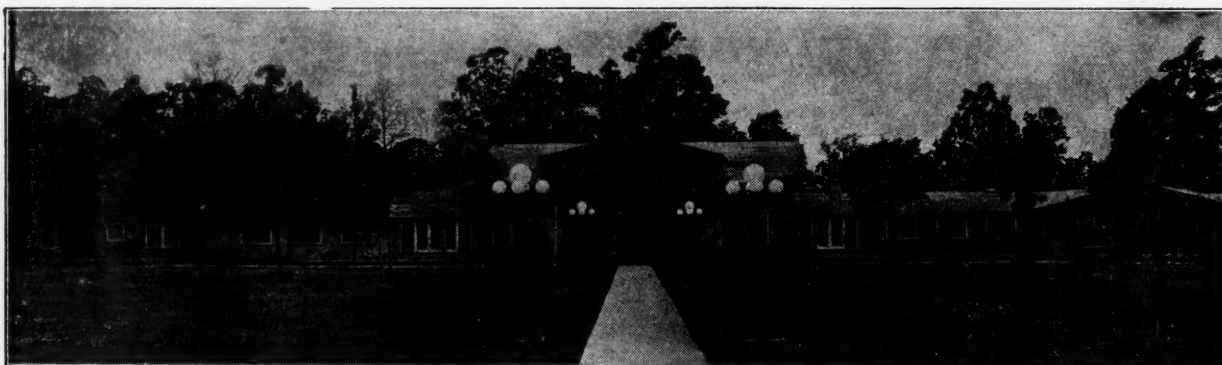
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The Journal

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Michigan State Medical Society

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Vol. XXI

GRAND RAPIDS, MICHIGAN, NOVEMBER, 1922

No. 11

Original Articles

MANAGEMENT OF THE CARDIO-RENAL CASE*

M. A. MORTENSEN, M. D., F. A. C. P.
BATTLE CREEK, MICH.

The cardio-renal case justly demands our earnest attention; first, because every practitioner meets the problems connected with this type of case every day in his daily practice, and, second, because this group of diseases has shown a steadily increasing mortality rate in the United States registration area for many years. We must also bear in mind the rather prolonged morbidity of this group of cases, with its associated economic factor.

In dealing with any group of diseases we always seek the cause as a guide in the management or treatment. In the cardio-renal case we are still more or less uncertain as to the definite cause of the disease, but, nevertheless, most authorities are agreed that some form of toxemia, as a rule chronic in type, is the fundamental cause. With these facts in mind it becomes our duty to study our patient from all angles to ascertain the presence of any possible source of toxemia. First, it is a good practice to search for any possible focus of infection, and this includes a careful study of the teeth, tonsils, sinuses, gall bladder, appendix, prostate and female pelvic organs. If we find reasonable evidence of chronic infection in any of these localities, they should be removed on general principle in order to help the body resist degenerative processes in the cardiovascular renal system. Another common source of toxemia is the intestinal tract and it is very essential that this should be given special study because there is no doubt that intestinal stasis becomes a disturbing factor in the well-being of the cardio-renal case.

Assuming that we have a proper conception of any possible etiological factor, we next must make an inventory of the present status of the patient. This means a careful search for any

symptoms of cardiac or renal disease. The condition of the heart is very important, because any failure on the part of this organ means an added burden to the already limited kidney efficiency.

Knowledge of the renal efficiency is very essential in guiding our efforts in behalf of the patient. Various methods may be used to ascertain this, but the simpler the method the more easily can the general practitioner keep himself informed as to the status of his patient. The Mosenthal renal diet test is probably the most complicated, but perhaps gives us the broadest knowledge of the efficiency of the kidney. It requires first class laboratory facilities, as well as trained technicians to carry out the details. The chemical analysis of the blood perhaps comes next in value, when it is thoroughly and carefully done. This means that an estimation of the non-protein nitrogen, uric acid, creatinin and blood sugar must be ascertained. There is also the phenol-sulphone-phthalein test, which is perhaps the one most frequently used. This, however, has its limitations, especially for the general practitioner.

More recently careful investigation has been made with reference to the urine concentration and diuresis test, and this is, by all means, the simplest means of studying renal efficiency. These tests have been especially developed by Olmstead, of St. Louis, and consist in having the patient go without food or water from supertime, or approximately 6 P. M., until 6 A. M., at which time the bladder is emptied. The patient is instructed to go still another three hours without food or water and to collect the urine passed during this last three-hour period. The quantity should be carefully measured and the specific gravity taken. Urine should also be examined for albumin and casts, a procedure which can easily be carried out in any physician's office.

In a normal concentration the patient would pass from 60 to perhaps 100 cubic centimeters, varying somewhat according to the size of the individual, with a specific gravity of 1.020 to 1.035. In cases of renal inefficiency it is not unusual to get a quantity of 200 to 600 cubic centimeters, at a specific gravity of from 1.005

*Read before Section on Medicine, M. S. M. S., Flint, June, 1922.

to 1.010, indicating that the ability of the kidneys to concentrate urine is very limited, and this means that efficiency of the kidney is interfered with.

It is also essential that careful blood pressure estimations be made in these cases, and we must use care and judgment in our technic so as to get a correct reading. Preferably the patient should be freed of all apprehension and have sufficient time to rest so as not to include the influence of exercise in the systolic pressure. It is imperative to have a correct reading of the diastolic pressure, because in my experience I am convinced that a diastolic pressure that persists above 100 or more millimeters of mercury means beginning renal inefficiency, and the higher the diastolic pressure the more serious the situation, as this means a continuous strain on the blood vessels.

In such cases we practically always find an increase in the nitrogen waste products in the blood and frequently an increase in blood sugar. These facts, when ascertained, give us an idea of the strain on the heart and blood vessels and serve to guide us in our instructions to the patient relative to physical effort.

In the examination of the heart, it is very important to get a correct idea of its size, which may be obtained by careful percussion or by X-ray. This gives us an idea of the intensity of the circulatory strain, both as regards severity and chronicity. A study of the heart sounds, both as to valve and muscle tone, should not be forgotten. Careful study of the conditions of the blood vessels is also important, and if one makes a systematic observation of the brachial arteries it is surprising how often definite evidence of arterial degeneration is found. A thorough investigation of the patient's condition, as outlined, will give valuable information as to his status and a basis for further observation.

Every detail of our instructions to the patient, as to his daily habits of living, is of great consequence; because of the fact that when cardio-renal disease is first established we have no means of producing a cure, therefore, we must put the patient in the psychological attitude of accepting the situation and making the best of it, and a thorough study, as suggested above, forms a good basis for impressing him as to his condition and what must be done.

First, it is essential to have the patient's cooperation in eliminating all possible infection and also in avoiding infections that increase the body toxins. The next most important factor to impress on his mind is the diet and care of the gastro-intestinal tract. Unfortunately, the laity's conception of a rational diet regime, even for a normal individual, is very vague. The student that goes to agricultural college gets in-

structions as to how and what to feed various domestic animals to get desired results, but we and our children go through school curriculum without any clear or concise instructions as to a normal, balanced ration, and much less what diet should be instituted in case of illness.

In my experience such instruction has been productive of the greatest benefit in the major number of cases that have come under my observation. He should be given a proper conception of the nutritive elements in the different types of food, and especially those that are rich in protein. Here, of course, we must vary our instructions somewhat, according to the severity of the case and the psychology of the individual. It is my practice in all cases that have high diastolic pressure with other evidences of renal inefficiency, to put them on a strictly non-flesh diet, and I suggest that they use perhaps one egg a day, together with two or three glasses of buttermilk as their source of protein. Unless the individual is physically active this will give a sufficient supply for the body needs, because other articles of diet will contain small amounts of protein, and thus the total intake is brought up to about 50 grams per day, which is ample. In the more severe cases we often further limit the protein intake. It is also imperative to impress upon the individual the necessity of being moderate in his total intake of food. There is no doubt that the great majority of people indulge in much more food than the body really needs, and this is decidedly detrimental to the cardio-renal case. If weight is normal then they should be instructed to take just sufficient food to keep it at that point, and it is surprising many times how the intake of food can be lessened and still maintain a proper weight.

In all these cases intestinal elimination must always be considered, and in my experience it is best to advise the use of fruits of all kinds that agree with the individual, together with the coarser vegetables or greens. This may have to be supplemented by the use of bran, mineral oil or agar agar, in order to insure good intestinal elimination. I strenuously object to the recommendation often made of taking saline each morning on arising. In the course of time this produces a spastic, catarrhal condition of the colon and sooner or later will interfere with intestinal elimination.

In the obese case, which is a common occurrence in this group of diseases, it is very essential to restrict the diet so as to have the patient loose gradually to the desired weight, then he should be instructed to curtail eating, according to his fluctuations in weight. Many of these patients are of the type that over-indulge in food, and, consequently, they are often surprised to find how little food is required to

maintain weight at its normal. It is also very important to impress upon these individuals the necessity of being sparing in the use of salt and to eliminate the use of various condiments. The use of these ingredients are of no physiological benefit to the body and only serve to stimulate appetite and to make it more difficult for the individual to maintain a properly balanced bill of fare.

Some have reported that the low protein diet does not lower blood pressure, or vice versa. So far these reports are premature, as the ones I have seen have been based on short periods of observation, and my experience, as well as that of others, rather emphasizes the necessity of carrying on this regime over long periods of time. Some cases respond quickly and others may not respond at all. However, the latter group is rather small, except in the advanced cardio-renal case, with emphasis on the renal phase, as evidenced by the very high diastolic pressure.

A word should be said concerning physical activities in these cases, and in order to give proper advice along these lines it is very necessary to form a definite opinion as to the capacity of the heart so as to give them an idea of the amount of effort permitted. It is our practice to urge these individuals to devote considerable time to walking, but to keep within the limits of producing fatigue. I know of no better exercise to recommend than walking in cases with good myocardial efficiency and golf as the best form of recreation. Many of these people must also be warned against sudden effort, such as running to catch a street car, and when traveling to avoid carrying baggage to or through the trains, as such effort often causes serious symptoms of decompensation.

Medicinal treatment is of very little value, excepting from the symptomatic standpoint. In the case that shows signs of failing heart I know of nothing better than digitalis to be used in doses, according to size of individual and the degree of decompensation. Again we may also have to resort to diuretics to stimulate the activity of the kidneys, and here diuretin, or similar drug, is of great value, especially when given with digitalis. In patients having a tendency to symptoms of angina pectoris diuretin is also of benefit in a certain percentage of cases, but nothing is better to eliminate the occurrence of pain by improving myocardial efficiency than digitalis. For emergency nitroglycerine must be used to relieve chest pain.

In conclusion I wish to suggest that the medical profession take active interest in any effort that is being made to interest the laity in rational habits of living, and particularly in teaching them what is a rational or balanced bill of fare. At the present time most people

are guided entirely by appetite as to intake of food, regardless of whether it is a properly balanced ration. When the laity understand what is a rational dietary and also realize the importance of eliminating all chronic foci of infection, the occurrence of this group of diseases will be greatly diminished, and, in my opinion, it is up to the medical profession to encourage the adoption of a proper educational curriculum in our schools and colleges so that the coming generation may be properly informed on the subject of diet at least.

DISCUSSION

DR. FRANK J. SLADEN, Detroit: I have been asked to open this discussion. I am heartily in accord with the views expressed by the essayist. He has covered the field very completely. We still have some trouble in individual cases, no matter what resources we use.

The first picture in my mind in reading the title of Dr. Mortenson's paper was the cardiorenal case that is perhaps not so frequent now in our experience as it used to be—the individual with myocardial insufficiency, with hypertension, with diminished urinary output, and perhaps signs of impaired renal function, with retinal hemorrhages of which we saw more years ago than now. It is not always easy to determine whether the disease is primarily cardiac or renal. Our interest concerns those patients who have not reached this extreme advance in the two domains of renal and cardiac disease. One would naturally suppose that every case ultimately would be cardiorenal, with much damage to one or the other organ. In most instances we are assuming the trouble is cardiorenal, or cardiorespiratory, or cardio anything if the patient is disorganized. It is a circulatory problem. We cannot differentiate these cases as to whether they are primarily renal or cardiac, and certainly we have reached the limit of our resources in repairing the disorganized circulation.

I was particularly interested in what Dr. Mortenson said with reference to diet. It seems to me, we are on the threshold of some real things in the dietary treatment of chronic disorders.

The one feature of cardiorenal cases which attracted my attention and interest has been those patients who early in their career or at later stages present themselves with hypertension, patients in whom it is difficult to determine the cause of hypertension, where all the tests referred to of renal function are quite satisfactory. We take it for granted that a chronic case of nephritis or a cardiorenal case does not develop over night. There must be degrees of severity in the process of development in these degenerative conditions. In these cases of hypertension we are at a loss to determine the cause of the hypertension, and we try to satisfy ourselves at the time whether in such cases there may be impaired renal function accompanied by renal or cardiac case under surroundings that are hypertension. We should immediately put the most protection to that patient. If we consider the renal functional tests, none of them demonstrate renal function under a load.

Little has been done on that point alone. Addis, of San Francisco, has published a report on giving large doses of urea, and several points have been brought out in connection with cardiac cases, and among them the method of examination. Myocardial function under strain should not need protection. At the present time we are investigating cases of suspected renal disease under protection.

So far as the present tests of renal function are concerned, they open up possibilities. From

the experience we have had during the last winter, in several instances we felt absolutely sure of an impending uremia in a renal case, and yet the patient went through with only a moderate impairment of function. We have gone a step further in the investigation of that case and have found out from urinary investigation and blood stream investigation that the various elements are excreted by the kidney.

Reference was made to the remarks of Dr. Crile of giving oxygen to the tissue cell which, after all, is an important factor in connection with toxemia, and of which we know very little at this time.

DR MORTENSON, (closing): I have very little to add to what I have already said except to agree with Dr. Sladen in studying these cases under various conditions. We may look upon the urine concentration test as forcing the kidney in its ability to concentrate urine. We can be reasonably certain that if it cannot concentrate urine at the end of fifteen hours of absolute absence of intake of water or food, we are putting a strain on the kidney. I might amplify what I have said relative to the tests in these cases. I had recently a case that was very interesting in which there was a history of albuminuria for twelve years. The patient was forty years of age and had never been able to obtain life insurance because of albumin. He came to me, and wanted to know what the situation was relative to his kidney. We made various tests involving blood estimations and found the blood condition to be absolutely normal. We gave the urine concentration test. That was normal. We went a step further and had him drink two and a half liters of water in two hours time and to save the urine. From the time he started drinking that water until the three hour period was passed, he eliminated 2100 c. c. at a specific gravity of a 1002, showing the capacity of his kidney at the various extremes was normal. By that simple test I felt justified in telling him he need not pay special attention to the presence of albumin in his urine; that his kidneys were able to do their work properly; that with ordinary precautions I saw no reason why he should not live a natural life in health, so that it is very important to get the present status of this type of cases to formulate our plan of regime in managing them.

Relative to impending uremia mentioned by Dr. Sladen, I have had some peculiar experiences in that regard. Of course, we expect in uremia, when we examine the blood, to find a high content of nitrogen in the waste product. Every now and then, say two or three times a year, I get a patient of this sort that has perhaps convulsions, very high blood pressure, and so on. But on examination of the blood we find very little that is abnormal. Is it not possible that we have in the blood some other substance that perhaps comes from a faulty metabolism, and we have not learned to estimate in the blood what causes these symptoms of uremia? We have a very interesting problem before us in the study of this type of cases.

THE RESPONSIBILITY OF THE GENERAL PRACTITIONER TO THE PHARMACOPOEIA*

C. W. EDMUNDS, M. D.
ANN ARBOR, MICH.

The subject which I would place before you under whatever title it may be called, whether it be the relationship or the responsibility or

the obligation of the general practitioner to the Pharmacopoeia, is, briefly stated, the improvement of our official list of drugs—the simplification of our materia medica. The term "Pharmacopoeia" then is symbolic; it represents the drug needs of the entire nation as expressed in the prescriptions of the practitioners of medicine from Maine to California; from Oregon to Florida. Yes, and even wider as we must broaden our thoughts to include also Cuba and the Philippines. It is not out of place nor untimely to consider the subject now, inasmuch as the Pharmacopoeia is undergoing its decennial revision and it becomes a matter of the greatest interest and importance to decide what drugs shall and what drugs shall not be included within its covers. For many years past the Pharmacopoeia has not been held in very high esteem by the rank and file of the medical profession due partially, perhaps, to a misconception of its function. It has been felt by many that it did not represent the best in therapeutics and was therefore not abreast of modern medical practice. Many widely used drugs were not within its pages while multitudes of others that were largely superfluous or useless were retained. In short, the book, largely due to medical neglect perhaps, has not represented the best in medical thought and it has therefore been widely ignored. In discussing its function it must be remembered that the book must not be considered as a treatise on therapeutics but at the same time it may be said that it should represent the best in therapeutics and not the worst. It is indeed a book of standards, but obviously it cannot attempt to standardize every drug which is used by the 150,000 practicing physicians of the United States, Cuba and the Philippines. And therein lies one difficulty. Who shall decide the question or draw the line between a skeleton pharmacopoeia which would satisfy the needs on the one hand of a professor of medicine who is engaged in a limited hospital practice, and the requirements of a government official who is responsible for the standards of all the drugs which are imported into this country? Both men have legitimate needs and arguments to support them and it is the task of the pharmacopoeial revision committee to decide between them.

Within the revision committee the responsibility of deciding what drugs shall be included in the book has been delegated in this revision to the medical members of the committee. Certainly a very logical decision. It would seem axiomatic that questions of a medical nature should be decided by the physicians on the committee while those concerning pharmaceutical problems should be left to the pharmacists. Simple as this rule may seem the present re-

*Presented before the Hillsdale County Medical Society, Hillsdale, Mich.

vision marks the first in which it has been adopted in modern times. The importance of this rule insofar as the pharmacopoeia is concerned can hardly be overestimated. It lays a great responsibility upon the physicians of the committee—they must weigh most carefully the claims of the different drugs and preparations and then make their decisions, basing them upon the best scientific knowledge of the day, combined with a knowledge of the needs of the country as reflected in the prescriptions of the practitioners of medicine. It is in regard to this latter phase of the question that the great difficulty arises. It is impossible to please everybody. It would be easy perhaps for each of us to prepare a list of drugs which, according to our own views, would meet the scientific test and which at the same time should satisfy the needs of the medical profession, but how would these lists agree? Many of the important drugs, such as opium, mercury and digitalis, would doubtless appear upon all the lists, but there would be many more upon which there would be no agreement. They would be accepted by some, only to be rejected by others. Variations such as these depending upon the personal preferences of the individual physician have resulted in the present pharmacopoeia with its 800 or 900 drugs. Take for instance the bromides—who shall say that all physicians shall use either the sodium or the potassium salt to the exclusion of the ammonium, calcium or strontium salt? And yet to admit all these salts would add unnecessary drugs to the official list for the sake of securing a bromide effect. Similar statements can easily be made as to the various salts of the iodides and of the salicylates. Also, should a physician be limited to one salt of each alkaloid? Something can certainly be done to shorten such lists and it might seem that the revision committee should exercise its undoubted power and eliminate at least some of these duplications. But it would not be wise to go too far. The bromide or the iodide effect is undoubtedly obtained from all these salts and so the patient does not suffer, and that is really the important thing, and it is certainly true that some physicians have a decided preference for one salt over another and they should be allowed that freedom of choice.

With some other drugs the situation is not exactly the same, as they are not all of equal value and the best should be chosen and the others deleted. Take digitalis, for example. Here the tincture is without doubt the best preparation and there is no necessity for any other. Nor, for oral administration, is there a need for any of the digitalis substitutes, such as strophanthus, squills, or convallaria. If therefore, the tincture of digitalis is the best preparation in this group it certainly follows

that it should always be administered to patients and there is no necessity for admitting any other preparation in this series except strophanthin for intravenous injection. The physician *should* have freedom of choice, but that choice in all justice to the patient must be based upon the best scientific knowledge available whether it comes from the bedside or from the laboratory, and usually the best results are gained by checking the data obtained from one source against that obtained from the other.

After all then, is not the pharmacopoeia primarily for the general practitioner of medicine and not for the specialist nor for the government official and does not its improvement, which really means its simplification, depend upon him? As a matter of fact, from the practical standpoint, it cannot advance faster than the rank and file of the profession. We have to face the facts even though it injures our pride as a profession. The pharmacopoeia is still filled, or at least littered, by useless or inferior remedies because these remedies are still prescribed to a considerable extent by the profession. If an effort is made to delete some of these worthless or inferior drugs there is an immediate and more or less widespread protest against such action, the protest being based upon the fancied needs of the profession. Already protests are being registered against the omission of certain drugs which the committee has voted to delete. And yet we must not be too pessimistic, as progress is being made. Already over 100 preparations have been selected for deletion and about 200 more are still under discussion. About 500 preparations which are in the present pharmacopoeia have been readmitted to the new revision and some 30 new ones added, such as acetyl salicylic acid, organic silver compounds, barbital, arsphenamine, procaine and dichloramineT. Now, if this number of items is to be curtailed in future editions and we really are to get a pharmacopoeia of convenient size and containing only drugs and preparations which are believed to have medicinal value, the initiative must come from the medical profession.

Physicians must endeavor to ascertain as accurately as possible the latest knowledge upon the action and usefulness of the drugs they employ. How many physicians purchase the latest works on pharmacology with the same regularity that they buy new editions on surgery or medicine? Do not too many of them rely upon the pharmacologies which they used as sophomore or junior medical students, and many of these books I am afraid are as dusty as the family bibles.

Omitting now the knowledge of drug action which comes from personal experience, which, with the exception of a few well tried remedies,

is exceedingly hard to gauge and evaluate in a practice confined largely to the homes of patients; and the information derived from standard textbooks and articles in the best medical journals, there is still another source of information which it would seem must be largely relied upon by a certain group of medical men. This mine of so-called information is the advertising columns of many medical journals and the pseudo-scientific literature of drug houses which floods our daily mail. The preparations so advertised must be prescribed by physicians or the manufacturers could not meet their advertising bills. What real knowledge can any physician have of the true composition of such preparations? The great majority of them are irrational and unscientific mixtures designed primarily for the enrichment of the manufacturers. They are recommended for this ailment or that and their appeal can only be to the unthinking physician and yet, as I have said, they must be extensively employed. The claims of even the better remedies in this group are too often supported by scientific literature which is really not scientific, or, what is still more dangerous, is only partly scientific. It is neither unprejudiced nor unbiased. If an up-to-date example be needed all we have to do is to read the current vitamin literature and advertisements. I might add, by way of parenthesis, that if the manufacturers should tell only the truth about the vitamins, and by that I mean the whole truth, there practically would be no call for them as drugs in this country. Some one would certainly suffer in such a case, but it would not be the public.

To come back once more to our subject: Can progress in scientific materia medica be made by any such means? And yet, are we going to stand still? Are we going to say that no physician shall prescribe any drug unless it is in the U. S. P.? If we make such a demand how are we going to make any progress? Where are our new drugs to come from? The pharmacopoeia is from the very nature of things bound to be conservative and may even be said to be years behind the most advanced scientific therapeutic thought. But the pharmacopoeia must grow and this growth must be not only by the leaving of dead and useless material behind, but by the addition of new and well tried remedies. But how can they be proved or be weighed in the balance if the average physician is not furnished with an exact statement of the composition of the preparation and also has not at his disposal the time or facilities for making a just estimate of their probable value?

It was exactly that question which confronted the organized profession some twenty years ago, when an effort was being made to

rid therapeutics of the multitudinous so-called remedies which had been foisted upon it by commercial interests. An answer to the question was found in the establishment of a national committee or referee board known as the Council of Pharmacy and Chemistry of the A. M. A. This committee or council is composed of sixteen members representing chemistry, pharmacy, bacteriology, pharmacology and internal medicine, including pediatrics. For some seventeen or eighteen years this council has been functioning as a judicial body, passing upon the claims which are submitted for new remedies and admitting those which conform to its rules into a book which is known as the "New and Non-Official Remedies." The rules of the council as they stand today are an outgrowth of the experience gained through many years. They are formed primarily with a view to protect the public and the profession from fraud, undesirable secrecy and objectionable advertising. One of the fundamental rules which must be met in order that a remedy may be considered for admission into "New and Non-Official Remedies," is that its composition must be furnished to the council together with tests for its purity and identity. The reasonableness of this rule is evident to every physician; as it is his right and duty to know the essential composition of every remedy which he prescribes for a patient. Direct or indirect advertising to the laity is not permitted as tending to self medication and concealment of serious disease. The irresponsible claims which are made in the lay press are especially undesirable and the cataloging of symptoms and indications for a remedy either in the newspapers or on the packages of the drugs have often unfortunate effects. All physicians are familiar with the harm resulting from such exploitation.

No false claims or statements may be made as to the origin of an article nor shall unwarranted therapeutic claims be made for any remedy. Certainly reasonable demands! There is nothing in any of the rules which would interfere in any way with the introduction to the medical profession of any new remedy which might promise therapeutic value provided it is introduced in an ethical manner, suitably named and no false or misleading statements regarding its composition or therapeutic value be made for it. Why should any manufacturer object to the work of the council if the remedies they introduce are intended primarily for the benefit of the suffering public? It should be clearly understood also that the work of the council is not primarily for the benefit of the physician, but only to enable the physician to serve the public better by furnishing him accurate information concerning the newer remedies he might wish to employ. The phy-

sician is then in a position to test the substances intelligently and if after three, five or ten years they prove of value, they may be admitted to the U. S. P., while if they have not lived up to expectations they may disappear entirely from therapeutic use.

The council is seeking also in other ways to aid therapeutics and to this end has published a little book upon "Useful Drugs," giving in a concise manner the main facts concerning the more important drugs. It has, through its Committee on Therapeutic Research, supervised and supported numerous research problems upon subjects of therapeutic interest. It has sponsored many articles upon different aspects of therapeutics, among the most recent of which may be mentioned a series of papers on "Biological Therapy," in which an attempt has been made to place before the medical public the present status of this important subject. Another article which might be mentioned is the recent statement concerning quinidine, in which the present state of our knowledge concerning this interesting drug is given for the benefit of those interested.

These articles are prepared either by some member of the council or by someone else selected by the council whose special work and study has made him capable of speaking with authority upon the subjects assigned. And here it might be pointed out that the council does not by any means base its decisions alone upon the views of its own members but has always had the aid of a large group of consultants representing all sections of the country and every phase of medical practice. Much of the value of its work is due to the help and advice which it has so freely received from this list of consultants.

All of the work of the council of course is not entirely pleasant. Many times preparations are considered by it which must be declined recognition either because of false statements concerning constitution, or because exaggerated and unwarranted therapeutic claims are made for the preparation or for failure to comply with one of the other rules of the council. One of the hardest rules to enforce is the one concerning therapeutic claims. How much leeway shall be allowed the manufacturer for therapeutic optimism, fortified as it is often by testimonials from physicians. Here, of course, a conservative attitude must be maintained, but usually in such cases the claims made are of such a character that there is little difficulty in drawing the line between probability and absurdity. Also, in case of doubt, the question might well be asked whether the manufacturer

or the patient be given the benefit of the doubt. It is a case of "dividends" versus health, or even life itself.

Such then is in brief the contribution which the American Medical Association, through its Council on Pharmacy and Chemistry, is endeavoring, to make to the progress of rational therapeutics, and the question arises as to what the practicing physician can do to assist.

First, I would say support the work which is being done by prescribing only U. S. P., and N. N. R. remedies. Referring only to the latter publication it would be an encouragement to the manufacturer who is trying to advance therapeutics along legitimate and ethical lines to give his products the preference. How many physicians, when they see a statement in the Journal that a product has been dropped from N. N. R. for false and misleading claims cease to prescribe it, or what would be even more helpful, write to the manufacturer and protest against such claims being made. I believe no action which a physician could take would be of more assistance to scientific therapeutics. If a remedy comes within the scope of the book and is not included find out why it has not been accepted. Ask manufacturers why it is necessary to make claims for apparently valuable drugs which are not justified or are unwarranted, making it necessary to include such drugs in a special section in the back of N. N. R. Such requests for information would be highly effective, as manufacturers are very susceptible to the springs which feed their treasuries.

Secondly, physicians can often make valuable contributions to therapeutic knowledge by reporting observations which they have made upon the actions, advantages or disadvantages of certain drugs. Accurate observations are from the very nature of things hard to make in the homes, but with the growth of local hospitals, improved opportunities will be available for such work. And finally, to come back to our starting point, it must be remembered that the U. S. P. is not the final word in therapeutics. It must grow—by deletions and by additions. *Materia Medica* must progress, but it can only do so along scientific lines. New drugs are welcomed provided they show signs of therapeutic worth and are marketed along ethical lines. It must not be supposed that such drugs are primarily to furnish dividends to stockholders. They are first of all for the relief of the suffering, and physicians as agents for their administration, are entitled to know absolutely what they are prescribing and to have proper standards of strength and purity provided for the same. No physician can afford to demand less.

NITROUS-OXIDE-OXYGEN ANAESTHESIA IN MAJOR SURGERY*

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The fact that the two foremost American Surgical Clinics have made radical changes in the methods of surgical anaesthesia in the past two years tends to prove that the topic of anaesthesia is a live subject and by no means a closed chapter.

Ether, nitrous oxide-oxygen, and chloroform are essentially the inhalation anaesthetics in use in this country today. Chloroform† has been practically removed from the armamentarium of the surgeon as too dangerous an agent, though it still finds favor with the general practitioner and in obstetrical practice. Local anaesthesia has made vast strides in the past fifteen years so that it is now possible to do essentially 80 per cent of all surgery by means of this method. This has been made possible by the perfection of novocaine, which is essentially non-toxic in the amounts necessary for good anaesthesia.

In the selection of the anaesthetic we have three important considerations: (1) Primary mortality; (2) delayed mortality; and (3) morbidity. As a result of the elimination of chloroform, the primary mortality has been markedly reduced. There still remains, however, a small percentage of deaths on the operating table from the anaesthetic per se. This again has been markedly reduced in the hands of the trained anaesthetist. Of delayed deaths, or deaths shortly after the patient has returned to bed, there is still a large number. This is especially true in the use of ether. While the anaesthetic is only one of the factors, it is undoubtedly the greatest factor in a large percentage of cases. The term shock is used in a sort of vague way to describe a phenomenon about which we seem to know as yet but little. That hemorrhage and trauma play a part we know only too well, but still we see cases which have had little trauma and no hemorrhage with rapid pulse, drop in blood pressure and a general state of depression after a deep ether narcosis.

The subject of morbidity has increased in importance with the general increase of surgical therapy in the treatment of various pathological conditions. Patients are no longer satisfied and the operation is not classed as successful by the laity if the patient merely es-

capes with his life, for he had that before the operation. How often must surgeons explain to their patients that a long time will be required for them to recuperate from their operation and only too often do the patients find this true. With the improvement of surgical results has come an increased confidence on the part of the public and a willingness to submit to early operation. This is particularly noticeable in appendicitis, exophthalmic goiter, etc. An early operation often lowers the morbidity, not from the operation itself, but due to the prevention of degeneration of other organs—the heart, the liver and the brain—as a result of disease. Early operation is thus the greatest factor in lowering morbidity in most cases. If we were to get all surgical cases early there would be essentially no mortality and a much lower morbidity. But unfortunately for various reasons, a large percentage of patients still get to the surgeon late, so that the mortality of the seriously ill is still appalling. If we are to further increase our good results, it must be by more attention to those seriously ill, i. e., those suffering from shock, from starvation, from sepsis, and from toxemia.

In the consideration of the latter class the choice of anaesthesia is of paramount importance and by its selection and skill of administration will our end results in no small way be influenced.

Nitrous-oxide gas combined with oxygen in the proportion of about 85 per cent to 15 per cent has been gradually gaining in favor as the anaesthetic of choice in major surgical procedures. It has the advantage over ether and chloroform that it does not of itself produce shock, that it is pleasant to take, that it is eliminated as soon as the anaesthetic agent is withdrawn, that nausea and vomiting as a result of the anaesthetic agent are minimized, and, that when properly given, it has the smallest primary and secondary mortality. If the latter sweeping statements are true, why should nitrous oxide-oxygen not immediately supercede all other inhalation anaesthetics. The answers are many: (1) The expense far exceeds the cost of other agents, (2) it requires a highly trained anaesthetist for its administration, (3) the apparatus for its administration is cumbersome, complicated and expensive, (4) it is impossible to get the required amount of relaxation necessary in some operations especially within the abdomen and pelvis, and (5) last, but not least, the anaesthetic is much more trying on the surgeon.

Do the advantages over-balance the disadvantages? Our answer, after six years of use of gas as a routine anaesthetic, is most certainly in the affirmative. We are not dogmatic however and recognize its limitations. From the

*Read before the Surgical Section, Michigan State Medical Society, Flint, June 9, 1922. From the Department of Surgery, Jefferson Clinic.

†Blain—A Clinical Study of General Anaesthesia. New York Medical Journal, May, 1898.

standpoint of the operator, gas has its limitations. How are we then to overcome these shortcomings? This can be accomplished by the combining of local anaesthesia with gas. As we have stated above, a large percentage of all surgery can be performed under local anaesthesia. But local anaesthesia alone does not eliminate the psychic factor—the mental anxiety alone being an important factor in the production of shock. If this is attempted by the use of larger doses of morphine, we are treading on dangerous ground as morphine is safe only within certain limits. The use of local anaesthesia alone gives in many cases a demonstration of the skill of the operator, but too often it amounts to skillful surgical gymnastics with the patient playing the role of an unappreciative listener. However, local anaesthesia does eliminate the local pain and the conduction of traumatic impulses to the brain. The fact that the patient is unconscious regardless of the agent, does not limit the actual damage to the brain cells by the operative trauma. Under local anaesthesia this is made possible. It further eliminates to a great extent the time factor in operating. There is no need for rushing.

There are other factors of importance, among them being the preparation of the patient for operation in elective cases; I mean the mental preparation. The patient is probably not accustomed to hospital routine and is liable to be frightened and apprehensive. All sources of anxiety and worry must be removed and the confidence of the patient must be gained. All annoyances and unnecessary noises must be eliminated. Pleasant surroundings are imperative, and the subject of operation should be avoided to as great an extent as possible. Every consideration should be shown the patient by the doctor, the assistants, the nurses, and attendants. This all constitutes a part of the anaesthesia. A good night's sleep on the night previous to the operation is essential and can be secured by drugs, and for this we prefer the combination of 10 to 20 grains of sodium bromide, 10 grains of chlorotone, and $\frac{1}{2}$ to 1 grain of codeine. Our patients, except children and the aged are given $\frac{1}{8}$ to $\frac{1}{4}$ grain of morphine and $\frac{1}{200}$ to $\frac{1}{150}$ grain of hyoscine one-half hour before the operation.

The use of local and gas does not meet all of the requirements of the surgeon in some cases, and at times it is necessary to give a small amount of ether for a few minutes to secure relaxation.

The combination of the above agents has long been advocated by Crile under the descriptive term anoci-association or anociation. He stands today as the foremost champion of gen-

tleness in operation, protection of the patient, lower mortality, and lower morbidity.

To return to the subject of nitrous oxide-oxygen as an anaesthetic agent without proper adjuncts, its place in major surgery is very small and in the hands of the average surgeon would give results far inferior to ether. If gas anaesthesia is to be employed successfully in major surgery, the following requirements are absolutely necessary: (1) A trained anaesthetist; (2) the surgeon must work each day with gas and not reserve it for any special class of cases; (3) the patient must be kept pink at all stages of the operation. If the surgeon deviates from any of these rules, he is courting disaster. If the surgeon wishes to employ gas he should meet its shortcomings by other agents, not by increasing the strength of the gas.

The more serious the patient's condition, the better they take the anaesthetic from the anaesthetist's point of view, but the more it becomes a factor of harm. In the seriously ill, analgesia[§] plus local while more difficult to handle, is the best for the patient; it rules out the emotions as well as pain and thus psychic shock is prevented.

If the surgeon selects his patient for operation, eliminating the bad risks; if the height of his interest is in conserving his own mortality rate rather than in the saving of extra lives; if he operates under deep ether narcosis with the relaxation of the post-mortem room, he surely will conserve much of his own energy, but he will fall short of doing his duty as a physician. Carstens used to preach to his internes, "Be a lion or a mouse" and the surgeon of today still needs the heart of a lion in his deliberations. Gas-oxygen combined with local anaesthesia ($\frac{1}{2}$ to 2 per cent novocain) conserves the strength of the ordinary surgical case, eliminates shock, and reduces morbidity from operative procedure to a minimum. Anociation combined with direct blood transfusion extends operability to the seriously ill, the jaundiced, the starved, the diabetic and the highly toxic. By its means it is possible to operate without an increase in the pulse rate or a fall in the blood pressure.

CONCLUSIONS

1) We are concerned today with the further lowering of our surgical mortality and morbidity. Nitrous oxide used as a routine anaesthetic is one of the big factors in accomplishing this end.

(2) Nitrous oxide-oxygen alone is entirely inadequate as an anaesthetic in the great ma-

[§]Crile—Some Considerations of Acute Abdominal Conditions in Gynecology. New York State Journal of Medicine, October, 1921.

jority of surgical operations. It should be combined with local anaesthesia.

(3) In administering nitrous oxide anaesthesia, the patient's color should at all times be pink. If the patient becomes livid the good results of the anaesthesia are defeated and the agent becomes a dangerous one.

(4) Nitrous oxide-oxygen is the safest of the inhalation anaesthetics in the hands of the expert. In the hands of the novice, it is the most dangerous.

(5) Nitrous oxide-oxygen preceded by morphine and hyocine and combined with novocaine (anociation) is an ideal anaesthetic and will give the best results in mortality, in morbidity, and in further extending help to a large class of patients which in some cases are classed as inoperable because of their serious condition.

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DISCUSSION

DR. E. O. SAGE, Detroit: I have thoroughly enjoyed Dr. Blaine's paper on nitrous oxide in major surgery. I agree with him in most instances that nitrous oxide is the anesthetic of choice, always preceded, however, by the use of morphine and hyocine, without which it is almost impossible to get sufficient relaxation, especially in abdominal work. Another thing, if the anesthetist knows his surgeon he will find the success of the anesthetic will be much better.

Regarding color, most text-books state that a successful nitrous oxide anesthetic is when the patient is kept pink. In reality the color of the patient will depend on the amount of hemoglobin; for instance, if you have a very anemic patient you will not change the color on giving a saturated solution or a straight nitrous oxide anesthetic, so for that reason you cannot consider the pink color as meaning that the patient is in a condition of sufficient relaxation for operation. The blood pressure is surely a measure of prime importance, especially in the so-called trying out of a patient preparatory to operation. The patient who can be saturated with nitrous oxide and come back and be resaturated will stand almost any surgical interference.

Another feature that I believe Dr. Blaine did not mention was rebreathing. I feel that one of the most important factors in successful nitrous oxide anesthesia is rebreathing. That can be very easily measured. I believe a machine so constructed that we can see the amount of new gases that go in will help to carry on a very successful anesthetic. That is brought out in this way: Given the amount in cubic centimeters that the patient can breathe, that is breathing at one inspiration or one expiration, and counting the number of respirations per minute, tables have been worked out by some of the best men in the country by which we can estimate a definite amount of rebreathing that will keep up the carbon dioxide that is essential in keeping the patient going.

Too little cannot be said regarding the training of anesthetists. The anesthetist rather than the doctor is more often I believe in a position to judge the patient's ability to withstand any sort of an operation. I believe if the laity themselves knew of the value of the anesthetic they would surely put more emphasis on who is to give the anesthetic. A very excellent gentleman and doctor whom most of us knew, Dr. Charles Moots, once said that he had told Mrs. Moots if he be-

came unconscious from something that required immediate surgical interference to insist on a good anesthetist; any good surgeon could do the operation.

Another feature regarding the mixture of your nitrous oxide and oxygen, we might say that a mixture of from 75 to 83 per cent of nitrous oxide with enough oxygen to bring the solution up to 100 is good in most instances. You will have little nausea if you guard against having too much pressure on your machine. If you have too much pressure you will have very severe post-operative nausea. The difference is explained by the fact that some people can sleep in a closed room indefinitely without any disturbing respiratory conditions while another individual will require all the windows open in order to be comfortable.

DR. J. H. KELLOGG, Battle Creek: This is a very interesting paper of Dr. Blaine. I have been interested in nitrous oxide for over thirty years and have used it almost exclusively for the last fifteen years. We have learned something by experience of the points brought out by Dr. Blaine. There are two or three other points that might be of interest. The great dangers from nitrous oxide we found were asphyxia and acidosis. The acidosis may depend very largely on the intensity of the anesthetic and the limit of time the patient is under the anesthetic and it also depends upon the condition of the patient before operation. Acidosis is combated generally by the liver. The liver function is to de-toxicate the poisons in the system. Now the liver cannot do this unless it has a good supply of glycogen and glycogen is a production of glucose. Therefore, the best way to protect the patient against acidosis is to give glucose before operation. This is accomplished by giving large quantities of malt sugar and milk sugar. The common practice of starving the patients, especially the abdominal cases, before operation reduces the glycogen in the blood and makes them favorable subjects for acidosis. Consequently for many years it has been our practice to fill up these people with glucose solution for twenty-four hours before operation instead of starving them. In addition, the patient gets a half pint of boiled water containing an ounce or more of sugar. Then every hour the patient has a glass of warm water containing an ounce or two of malt sugar. This not only supplies the body with carbohydrates, but supplies the body with the liquids that will be lost by the anesthetic.

Another thing is local anesthetic. In the abdominal cases we find that the tendency of the reflexes of the abdominal muscles is to very brisk. This can be greatly obviated by giving just beneath the peritoneum, just through the skin or even through the muscle and just beneath the peritoneum. In that way less anesthetic is required and the acidity is reduced.

Another point which is most important of all is the relation of the breathing of the patient. Deep breathing is most important. Short breathing increases the danger of asphyxia. If the patient gets blue in the face it is because he has asphyxia. If we would permit the patient to breathe deeply much of the asphyxia would be eliminated. A method which I have used is a compress of ice water covering the chest. When this is applied the patient at once takes a deep breath. You found that out when you went in swimming as a boy. You cannot put your hand in cold water without taking a deep breath. This reflex action will cause you to take a deep breath. What you want when you get a patient under an anesthetic is to give him more gas. Increase the percentage of gas and you cut down the oxygen, but you get more gas without reducing the percentage of oxygen by the cold compress and in that way you keep the patient breathing deeply. Leave the compress on five minutes, then

take it off and rub them briskly. This rubbing is important because the nerves will become interrupted and the skin must be rubbed with a dry towel so as to procure a reaction. We find that by adopting these different courses that we have no trouble with the gas. We use gas oxygen anesthetic in all types of cases and the mortality is no more than with ether.

DR. C. D. BROOKS, Detroit: I think our section is to be congratulated by having such an important subject brought up before the Surgical Section. As a rule gas is not used enough because some one has the idea that it is not as safe as some other anesthetic. As a matter of fact, if it were given a trial by a competent anesthetist we would find it was the safest anesthetic. I think the anesthetic that is considered the safest for the patient is the one to be adopted by any surgical group. We have had experience with gas oxygen for about seven years and we feel more and more convinced that it is the best and safest operation for the patient. It should be given by an expert the same as surgery should be done by an expert. Once in a while we hear some one say a patient died from gas. It is necessary to have team work in order to get the best results. A patient going into the hospital should be met by those with whom she deals later on. I think the anesthetist should be introduced to the patient by the surgeon and have a minute or two talk by herself. A few minutes' talk before the operation will satisfy the patient. First of all, the anesthetist can tell the patient there is no danger, which is true if the anesthetist is giving the anesthetic. The danger is so small it is like the danger of one going downstairs. "There is nothing to worry about, we will take care of you no matter what happens" with quiet efficiency all along the line bring that patient through the operation to a state of convalescence which you cannot do with any anesthetic except local, which is not so desirable.

DR. H. W. PLAGGEMEYER, Detroit: I think in kidney surgery particularly there is a very brilliant field to demonstrate the efficacy of nitrous oxide. You remember McNye's experiments in which he divided the dogs into three groups. To one group he gave chloroform and ether, the second local and the third nitrous oxide. In every one where he gave ether and chloroform he got a fat embolism in the glands. In this line of work I think you have the most striking field for the use of nitrous oxide accompanied by morphin. We do not have the same effect experimentally that we have with ether and chloroform.

MEDICAL MANAGEMENT FOLLOWING GASTRO-INTESTINAL SURGERY*

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In the past we have had much acrimonious discussion concerning the relative value of medical or surgical treatment of many gastro-intestinal conditions and particularly of gastric and duodenal ulcer, but I believe that among thinking medical men, there is agreement that both proponents are in a measure right, and in a measure wrong. We are agreed that all gastro-intestinal conditions should first be investigated by the internist who should, if pos-

sible, determine the diagnosis and by various functional tests attempt to determine the extent and seriousness of the lesion. At this point, in many cases, it is desirable that there be a reasonable consultation between the internist and surgeon to determine if medical or surgical treatment should be instituted, for it must now be an accepted fact that not all peptic ulcers require gastro-enterostomy or excision nor is it advisable to remove or surgically drain every case of cholecystitis. The surgeon is no longer willing to operate on a peptic ulcer of comparatively short history which has not had the benefit of proper medical treatment; and on the other hand the internist does not wish to treat medically the patient who shows definite evidence of organic obstruction at the pylorus, or perhaps has indefinite gastric symptoms which there is good reason to believe is caused by an infected gall bladder. This better co-operation between medicine and surgery has, I am sure, been of the greatest value in obtaining far more satisfactory results than was possible during the period of more arbitrary decision. There is, however, still something to be desired in the way of team work if we are to do ourselves and our patients full justice.

After very few surgical procedures upon the gastro-intestinal tract can we hope for complete restoration of the normal function. Perhaps in an early operated acute appendix there is relatively little change from the normal function, but even here there may be adhesions formed which are not entirely innocuous and which may give rise to some digestive disturbances. Certainly no one will argue that any surgical procedure for peptic ulcer will allow the digestive load to be as ably handled as by a normal stomach and small bowel. Both surgeons and internists have felt that there was still much to be desired in this class of surgery. Bastedo(1) reports that in his practice, ulcer cases that have had one or more operations come for treatment almost as frequently as ulcer cases which have not been operated, while Davis(2) of Omaha states that 15 to 40 per cent of operations done for gastric ulcers are failures.

It is hardly conceivable that the damage done by an old cholecystitis is entirely eradicated by either drainage or excision. Graham(3) has shown that hepatitis is a constant accompaniment of cholecystitis and varying degrees of pancreatitis are a rather common complication of cholecystitis. Even as regards the gall-bladder and large bile ducts recurrence is frequent. Deaver(4) in 1920 reported 800 cases, of which 8½ per cent were reoperative cases, several of which were tertiary operations.

In that type of chronic appendicitis which produces reflex gastric symptoms, often simu-

*Michigan State Medical Society, Flint, Mich., June 9th, 1922.

lating rather closely the syndrome of peptic ulcer, we have a particularly refractory type of trouble. It would seem that we have had for so long an upsetting of the reflex mechanism of the stomach that the removal of the original offending agent does not entirely alleviate the insult done to the intricate mechanism involved.

In resection of the small bowel there is often at least temporarily distressing digestive disturbances and this is much more true in resection of the stomach for suspected carcinoma. There are, of course, other examples of the less common operative procedures on the abdomen in which results short of normal are the best we can hope for, but those enumerated constituted the bulk of our problems.

I would not, however, wish to convey the impression that surgery is unsatisfactory or undesirable in many gastro-intestinal conditions. In far the greater proportion of cases the failure to obtain a normal gastro-intestinal tract is due to the underlying pathological process and not to surgical errors. If one had a badly shattered femur he would not refuse surgery because he might ultimately have a somewhat shortened leg, but would rather wish such measures taken as would aid in most nearly approximating its former usefulness. Similarly, we must use surgical measures when indicated and supplement them with such medical treatment as will be most useful in securing the desired result.

Why then should not all such patients be returned to the internist who has made a study of dietetics and medical management of digestive disorders, so that he may again test their digestive function and advise intelligently after this has been determined? The surgeon, as a rule has neither the time or inclination to do such work, nor should he be expected to have. We are, however, justified in asking that he turn the problem over to one who is capable of doing so. If the patient has not previously been seen by the medical man, it is even more important that he should be taken over and by one familiar with such investigations.

Perhaps in no other class of patients is post-operative medical supervision quite so necessary as after the various operative procedures for peptic ulcer. No hard and fast rules can be laid down for their managements, as many factors enter into the decisions in these cases. The type of operation which was chosen, the previous history of the trouble, the social and economic status of the patient and his temperament must all be considered before you can intelligently advise. Among many good surgeons gastro-enterostomy, either with or without excision, will often be the operation of choice. If it is not advisable to excise, there will still be the ulcer to consider. It has been repeatedly

shown that there is a strong tendency for at least a part of the food to be emptied through the pylorus. Even if excision has been possible, the tendency to recurrence must be guarded against. In every case re-examination by the X-ray is desirable to determine how well the new opening is functioning and if there is gastric retention or pylorospasm. Gastric analysis should be repeated to determine if hyperacidity is still present, for Sippy(5) has pretty well proven that hydrochloric acid is a serious hindrance in the healing of ulcer and the emptying of highly acid poorly prepared chyme into a portion of the bowel not fitted by nature to receive it can surely be thought of as at least a strongly contributing factor in the causation of jejunal ulcer. If hyperacidity is shown to exist it should be controlled by the careful use of alkalis and by withholding from the diet such food as will provoke excessive acid secretion. We can not hope for the best ultimate result if the patient is turned loose after a few weeks with the advice that he can eat anything he wishes. It is usually advisable that for a number of weeks after release from the hospital the patient be given three small meals a day with one or two milk and cream feeding between meals. The meals should consist of bland, easily digested food, such as breakfast cereals, poached or coddled eggs, custards, pudding, strained vegetable soups, and some bread. The use of alkalis depend on whether or not there is any considerable amount of acid. Its use must be checked by the use of the stomach tube and should not be dispensed with too soon. At the end of six or eight weeks the diet can be gradually increased ultimately, including nearly all foods except those that are fried; the coarser vegetables and very acid fruits. The meals, however, should not be large, rarely exceeding ten or fifteen ounces in amount.

Often, after all seems well following some mental, physical, or dietary indiscretion, the patient will have a distressing return of his old symptoms, but investigation will show only an irritable stomach with spasm and increased peristalsis. A few weeks of the previous treatment, with small doses of atropin, will again put them on their feet. These patients do much better if they will occasionally come back for re-examination and advice. It should be strongly impressed upon all ulcer cases that medical supervision is as important as though they had nephritis or diabetes, and that ulcer is essentially a chronic disease with a tendency to recurrence. If this is not made very clear and emphatic they will drift out of your control, forget your orders as to diet, and overtax their imperfect digestive apparatus. Eventually, in most cases they will again get in trouble and

perhaps drift into other hands, feeling that their surgery was improperly done.

Medical treatment following the removal of certain types of chronic appendix is, I believe, of scarcely less importance than in peptic ulcer. We must admit that in the past the results have been far from satisfactory. So much so in fact that among certain men the operation has had a bad repute, which it did not deserve. As the distressing symptoms of chronic appendicitis with gastric symptoms are usually due to reflex hyperacidity and pylorospasm, the plan of treatment adopted for ulcer can be used in a modified form with gratifying results. It is hardly necessary to insist on so strict a diet, nor is it necessary to continue the regime so long. After six to twelve months supervision we can expect in a large percentage of cases reasonably good recovery, though there will probably be a higher percentage of failures than in carefully supervised ulcer cases. Here too, the patient should be told that his digestive organs will not stand the insults that can be put upon a normal stomach and bowel. In these types of cases there is apt to be an obstinate constipation which must be considered. This can often be helped by the rather liberal use of calcined magnesia in the alkali therapy and by the more rapid resumption of a coarse residue-leaving diet. Liquid petrolatum may be used, but, if possible, keep away from the more drastic laxatives and insist on regular habits of bowel movements, as the permanent relief of the constipation is essential if the patient is to become free from digestive disturbances.

After gall bladder surgery a survey of the patient's digestive ability should be made and the extent of the damage done the liver and pancreas determined if possible. If practical, a careful study of the pancreatic ferments and bile should be made. When this is impossible, a careful clinical study and stool examination will give us much of the desired information. On this basis his diet and medication can be ordered. It is rather customary to advise a limitation of fats, but this is only necessary if the stools show fat indigestion. It is even more necessary that we be assured that there continue to be a free evacuation of bile and this can be fairly well determined with our present methods of trans-duodenal drainage. When this is found deficient it can often be aided by such methods. I feel that perhaps eventually this rather popular procedure will find a more useful field in postoperative treatment than in preoperative diagnosis. Often after cholecystectomy diarrhoea is a troublesome symptom, due to the flow of bile through the post-digestive stage and may require the use of such drugs as tanalbin or catechu. In such cases the use of non-residue leaving foods is desir-

able. If there is reason to believe that there has been an extensive pancreatitis the diet should be so arranged so not to put too great a strain on the carbohydrate tolerance.

In such procedures as resection of the stomach or bowel for malignancy, obstruction or mesenteric thrombosis the problem is largely individualistic and any general suggestions are of little value. It can only be urged that such patients be carefully studied and the amount of work that their altered digestive tract can handle be determined.

It is, of course, hardly necessary to add that every patient with a gastro-intestinal complaint should be investigated for any foci of infection and where found they should be removed. This is very important from the standpoint of recurrence, both because of the general lowering of resistance and because of the possibility of direct embolic action. The renal cardiac and circulatory symptoms should be put in the most efficient condition and the environment of the patient made as happy as possible. The social service worker or community nurse can often be of aid in this way, as the poorer patient may be unable to follow your advice or to obtain the proper diet because of home conditions or because of his occupation. When this is true, it is to the advantage of the State that he be aided in carrying out such orders.

In this paper I have not attempted to lay down any rigid regime for these conditions, as every patient is a problem in himself and I do not believe we can all obtain the same results with the same methods. It is rather my wish to impress upon you that the medical man still has a responsibility in the ultimate care of all gastro-intestinal surgical cases; and that if such patients are turned adrift without supervision following their operation we can expect that a considerable number will not obtain the degree of benefit to which they are entitled. As a result efficient diagnosis and surgery will be unjustly criticized because we do not complete our work.

DISCUSSION

DR. FRANK J. SLADEN, Detroit: This is a paper after my own heart. I have been deeply impressed with the views expressed by the essayist on this subject, and I only wish more surgeons could have been present to listen to it. The internist and surgeon are not as closely related in the after-management of operative cases as they should be. A patient may undergo an operation for the removal of the appendix or an operation on some other part of the gastrointestinal tract for the relief of a group of symptoms he had previous to operation, and yet after operation, largely due to improper aftercare or management or neglect, that patient for a long time may complain of disturbances sufficient to cause him to seek further relief either at the hands of the surgeon or the internist. These cases after operation should be referred to their family physician for postoperative care and treatment, but usually they are not. The internist and surgeon should work

hand in hand in these cases. One reason why this cannot be carried out has been pointed out by Dr. Green, namely, in the larger hospitals there is not that smoothly working organization that there should be. Such hard and fast lines are drawn between surgery and medicine, that it is hard to give patients that after-care they should receive. I feel sometimes the family physician is to blame for catering too much to the specialist, and patients after operation are not turned over to the family physician for future management as they should be. I have always had the hope that some time in the future there will be a grouping of cases according to their character, so that in this way the internist and surgeon will come more and more into intimate contact with each other and patients will get what they need as suggested in the paper.

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LATERAL SINUS THROMBOSIS*

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The aspects of this thesis which will be touched upon might well include:

First—The anatomic relation of the lateral sinus.
Second—The pathologic sequences leading to its infection and subsequent thrombosis of its contained blood-stream.

Third—Symptomatology of (a) lateral sinus phlebitis; (b) thrombosis.

Fourth—Differential diagnosis.

Fifth—Prognosis.

Sixth—Medical and surgical management.

ANATOMIC RELATIONS

That part of the temporal bone, most concerned in the events preceding and leading up to lateral sinus thrombosis, will be found to be in very intimate anatomic relationship with two of the great systemic anatomic divisions, viz: First, the vascular system, and second, the central nervous system—with the former this discussion is for the moment most concerned, and it will be seen that the tympanic cavity and mastoid process, in addition to the blood supply directly concerned with nutrition, is in close anatomic relation to major vessels of both the arterial and venous type.

Furthermore, very direct and intimate intercommunication may be demonstrated, both for

the venous and the arterial systems with the vascular network within the walls of these cavities. It is this close proximity and intimate intercommunication that furnish the physical anatomic status leading to and making probable extension of the infective processes from the temporal bone to these adjacent important vascular structures.

Inasmuch as the natural current of the blood and its serum is from the arterial system to the tympanic cavity and from the latter to the venous channels, one would naturally expect pathologic processes of a septic character to pass into the venous channels rather than into the arterial. That this is not the only way, however, is demonstrated by cases recently reported by Bowers (*Am. Society of Laryngology, Otology and Rhinology*) in which the internal carotid artery was involved through the tympanic cavity, with fatal hemorrhage.

This, however, is a rare occurrence, and far more frequently the venous channels become involved in the septic process.

The anatomic relationship of the lateral sinus with the temporal bone becomes intimate at the knee of the sinus, continues throughout the whole course of the sigmoid portion, and includes also the jugular bulb.

Throughout the whole course of the vessel covered by the above mentioned divisions the walls of the vessel lie in close proximity to the bone forming the lateral sinus groove, its walls forming the periosteum of that part of the temporal bone, and so coming into intimate vascular relationship with the blood supply of the whole mastoid process.

Thus is clearly established the anatomic vascular pathway through which may travel sepsis within the mastoid and tympanic cavity on its way to the great vascular channels involved in lateral sinus thrombosis.

The jugular bulb is in the same close anatomic relationship with the floor of the tympanic cavity.

One should not leave the anatomic phase of this subject without at least referring to the many anatomic variations both in the matter of the position of the lateral sinus groove in its relation to the mastoid cells, and also as of equal importance the variations in the cells themselves, covering the wide difference between a vastly developed mastoid of the pneumatic type, through the diploic type to one in which pneumatization has never started or has been early stayed in its progress.

These various types of mastoid structure have a distinct bearing on the probability of the incidence of this complication in a given case of acute or chronic mastoiditis. The influence of the anatomic type of the mastoid on the course of the infection is only secondary to the

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varieties of the bacteriologic finding in these cases.

PATHOLOGIC SEQUENCES

In every case of infection of the mucous membrane lining the tympanic cavity, the mastoid antrum and adjacent mastoid cells are more or less involved. As the process proceeds, the underlying bone becomes involved, and then to a simple mucous membrane infection is added an infective osteitis, which if not controlled by natural processes or relieved by medical or surgical procedures, progresses over an ever widening and deepening area, until finally the internal surfaces of the inner plate are involved and the way has been blazed for extra temporal bone complications of various types.

There are different ways in which this extension may take place, and they should be clearly understood and sharply differentiated, because, according to which type is present will depend the early or late incidence of vascular intracranial complications.

(a) The septic inflammatory process may, in the first place, proceed by a rapidly widening area of involvement, without the formation of a protective process limiting the advance of the infection. In this type, there is little effort to throw up a limiting protective plastic area around the area of infection, and the process proceeds rapidly with open venous channels, which quickly carry the infection to outlying areas.

In this type, the inner surface of the bone is quickly reached without the intervening osseous area having undergone any great amount of caries or necrosis, so that an infection of the walls of the venous channels takes place without macroscopic evidence of bone destruction, furnishing the type of lateral sinus thrombosis occurring in acute tympanomastoiditis.

(b) On the other hand, there is that type of septic process characterized by the throwing up of a barrier to the progress of the infection which more or less effectually limits its onward course.

In this type, thrombosis takes place in the venules of the bone involved in the protective area, cutting off its nutrition but limiting the progress of the infection, then instead of a rapidly widening area of infection with intact bony structure, as in the former process, in this type the nutrition of the bone suffers, caries takes place and the picture of a breached internal plate, with perhaps an extradural abscess, is presented.

Many times an exposed but non-infected sinus is thus found.

Furthermore, in chronic suppurative otitis media with much caries in the mastoid, the

dura over the sinus is quite frequently found exposed and covered with granulations over a wide area, the sinus remaining healthy.

These are cases which, in the primary destructive bone processes, were of that type in which the onward progress of the infection has been stayed by the thrombosis in the venules of the bone, and the force of the infection spent on the bone tissue itself, the spread to the soft tissues further on having been checked by the venous bone thrombosis.

In such a case the status of an original acute mastoid disease is brought about by a secondary infection which now might easily extend to the vein, causing phlebitis and subsequent thrombosis of its contents.

The picture one must carry of the events leading to a thrombosis of the blood in the vessel must, in its early stages, be that of a phlebitis, an infection of the tissues making up the walls of the vein, the inner lining at first remaining intact and the contained blood passing on uninfected.

Then comes a breach in the inner lining of the vessel, a slowing of the onrushing blood at that point with the formation of a coagulum, which quickly becomes infected and, the picture of a beginning thrombosis is before us, the way opened for the general bacteremia which gives the characteristic symptoms so universally accepted and recognized.

The coagulum which is now infected, gradually grows and spreads until a mural clot is formed, and as long as blood finds its way past the clot to continue into the general circulation the characteristic symptoms may continue, the onrushing blood detaching particles of the infected clot. When, however, the whole lumen of the vessel is occluded by a solid clot, these symptoms may not again recur until such time as the clot again undergoes liquefaction and is once more thrown into the general circulation.

One hears sometimes of an uninfected thrombosis, which condition is open to some doubt, in view of the experiments made by Dr. Angus McLean, many years ago, in which he showed that a breach of the inner wall of a vein, even accompanied by the introduction of a current staying substance into the current of blood flowing through the vein, was not followed by clotting of the mobile blood in the vessel, so long as the area was sterile and free from infection.

It must not be forgotten that a sinus thrombosis may occur at various points in the course of the vessel, the most usual being through the mastoid, in which the favorite place for it to have its inception is at the knee, or just below it—the next most common place being farther along the course of the sigmoid, above the bulb, but on the other hand the route may not be

through the mastoid at all, but through the floor of the tympanic cavity directly into the jugular bulb. Dehiscence in the tympanic floor would favor such a course, and it is furthermore more likely to occur in children than in adults.

SYMPTOMATOLOGY

(a) *Lateral Sinus Phlebitis*. When an infection of the air spaces in the temporal bone is progressing favorably, the establishing of free drainage through a perforation of the tympanic membrane is followed by an immediate and permanent improvement in all the symptoms; pain ceases, tenderness becomes less or disappears, fever is absent or not over 99 or 100, pulse but little elevated, the patient feels well, and the tongue is not coated, the blood picture is but little changed from the normal. When phlebitis takes place, the above is reversed in a moderate degree, and frequently an undue tenderness is found at the angle of the jaw and there may also be found at the point a few enlarged glands. However, the patient does not seem very ill, and an exact diagnosis cannot be made, but merely suspected.

The tenderness at the angle of the jaw and enlarged glands are things very difficult of exact demonstration, especially in a sick, fretful and violently objecting child. Nevertheless, one must always suspect such a condition under the above mentioned symptomatology, and early radical surgical intervention, which should include free drum incision and complete mastoid exenteration, may prevent an impending thrombosis.

(b) *Lateral Sinus Thrombosis*. The outstanding thing in many cases of lateral sinus thrombosis is that in the early days of the inception of the process the patient does not appear to be very ill, and this is true even after the characteristic symptomatology of chills, high temperature, sweats and sudden drop in the temperature to normal or below—the pyemic symptom-complex—has become established. Between the violent excursions of temperature the patient feels comparatively well.

Nevertheless, the tongue is always coated, the appetite capricious, and the blood picture shows a leucocytosis around 17000.

When to these symptoms is added a positive blood culture, the diagnosis may be said to be complete and incontrovertible. The symptomatology of lateral sinus thrombosis would be a very clear-cut and unmistakable thing if it were not for the fact that many such cases are accompanied by other intracranial lesions such as meningitis, brain abscess and extradural abscess, which many times perceptibly cloud the issue. The question of blood culture is one which, when positive, is very important, but

when negative does not mean much for the reason that in the intervals between the exacerbation the bacteriocidal properties of the blood may effectually destroy the bacteria. The most likely time for the demonstration of a positive blood culture is at the height of the temperature curve, and furthermore the nearer to the source of the infection the blood is taken the more likely it is to show a bacteremia.

DIFFERENTIAL DIAGNOSIS

It must not be forgotten that many systemic complications may elevate the temperature and pulse and give a clinical picture simulating that furnished by a lateral sinus thrombosis; thus, an obstructed tympanic drainage will simulate such a complication. Follicular tonsillitis must not be forgotten. Pneumonia must be excluded.

A situation which certainly taxes the ingenuity and resourcefulness of the auradiagnostician is presented by the necessity of telling upon which side the sinus thrombosis may lie, in a case of double tympanomastoid infection with clean cut sinus thrombosis symptomatology either before or after a double mastoid operation has been done. The following considerations are offered as being of value in rightly interpreting this puzzling situation.

(a) Anatomically the right sinus is so situated in relation to the mastoid cells as to render it more liable to infection than the left in the proportion of 3 to 2.

(b) The time of incidence of the original infection has some weight, the older the process the more likely the complication.

(c) X-ray findings, showing variation in type of anatomic development of the two sides, the position of the lateral sinus and the extent of the mastoid cell disintegration.

(d) The difference of tenderness and gland involvement at the angle of the jaw, of but little value in children.

(e) When the sinus is completely occluded, compression of the jugular vein on the opposite side will cause increased fullness of the ventral veins as observed by the ophthalmoscope; of value only when the sinus is completely occluded, and then not easy of demonstration.

(f) The character and extent of the bony sepsis as observed at the time of the original double mastoid operation.

All of the above considerations may yet, and indeed frequently do, leave one still in doubt, and one must resort to

(g) Exposure of both lateral sinus from above the knee to as near the bulb as one can get, and through a critical examination of each vessel by touch one can see in the walls or on them—by palpation—by obstruction of the

flow high up and subsequently refilling or not of the vessel when the pressure is released.

(h) A procedure suggested to the writer by Professor R. B. Canfield, of the University of Michigan, as follows: After thorough exposure of both vessels as above, a sterile hollow needle attached to a syringe is introduced through the walls of the sinus as low down as possible and the point pushed into the jugular bulb; the contents are then withdrawn into the syringe and the product from each side examined and compared.

The correct diagnosis of which side harbors the thrombosis is, of course, of the very highest importance, because one side only may be operated, and if that be the wrong one the mistake is irreparable.

(i) The former ear history of the case is extremely important, because, other things being equal, the side which has formerly been infected once or many times, or is the seat of a chronic suppurative otitis media, is far more likely to furnish a lateral sinus thrombosis than one infected for the first time.

In this communication I purpose making two brief case reports, only because they both bear upon this important, interesting, and ever puzzling situation.

CASE I

B. H., a female child, age 6, developed a double tympanic abscess first in right ear, and 36 hours later in left. Both ears received early aid from drum incisions, and active medicinal treatment. Both mastoids went on to the second degree, and a double thorough simple mastoid operation was done fifteen days after the original tympanic infection. History free of former ear disease.

The temperature which, previous to the double mastoid operation, was high and capricious, was not influenced favorably by the surgical procedure.

A diagnosis of lateral sinus thrombosis was made very definitely. Upon which side was the thrombosis? This interesting question was solved correctly only when both sinus were completely exposed. In the wall of the left sinus was found a yellow spot which looked like pus in the wall of the vein. However, when the right one was likewise exposed, a far more advanced pathology was revealed. A large area of the wall of the sinus was found indurated and covered by a well-developed gramilomata one-half inch in extent.

This side was selected on the basis of the more advanced macroscopic pathology presented, the jugular tied, sinus packed, off and operated. The recovery, from this on, was uninterrupted.

CASE II

Need not be reported in detail, because it was an exact replica of Case No. 1, with, however, this very important difference. The history of the case showed that the child, 18 months before, had had a right sided tympano-mastoid infection following scarlet fever, which had passed on into a chronic suppurative otitis media. Both sinus were exposed and the right one selected for jugular ligation and excision of the sinus contents. Again the recovery was prompt, and complete.

Gastro-intestinal disturbances in children frequently bring about a similar train of symptoms. A septic thrombosis of some other venous channel in the body would give a closely allied symptomatology, and one of the most puzzling complications, especially in children, is pyelitis, which furnishes just

such temperature and pulse excursion as are found in sinus thrombosis.

However, every one and all of these conditions are capable of being differentiated definitely, especially with the aid of an internist and pediatrician. This, however, I have to say—that as one swallow, or even two, does not make a summer, so one or even two violent excursions of temperature do not establish a diagnosis of lateral sinus thrombosis, and one should feel that it is a condition which does not demand precipitate action, but furnishes plenty of time for careful, thoughtful investigation and painstaking differential diagnosis.

PROGNOSIS

Of all the intracranial complications, save extradural abscess, sinus thrombosis, early recognized and dealt with in a comprehensive surgical fashion, offers the best possible prognosis.

Dench, from his statistics, has a mortality following the operation of 28 per cent, but states that many of those cases died from complicating diseases such as meningitis and brain abscess. So one might safely say that in uncomplicated cases, dealt with early and thoroughly, the mortality would be a very creditable chapter in surgery.

MEDICAL AND SURGICAL TREATMENT

But little time need be consumed in discussing the treatment of lateral sinus thrombosis for, once the diagnosis is established, the management of the local situation is a purely surgical problem as far as the sinus thrombosis is concerned.

The sinus must be widely and thoroughly exposed above and beyond the thrombosed area and below as near the bulb as may be, packed off and thoroughly opened.

So far, all may be said to be agreed, but the same unanimity of opinion is not found when one searches for the attitude of aural surgeon upon the management of the jugular vein in the neck.

My own opinion, based upon a fairly long and what might be said to be a reasonably wide experience, is that by all means the jugular vein should be ligated in the neck and resected above the facial vein, and that it should be done as the initial procedure in the operative technic, and before the sinus is opened, but after it is exposed.

In my cases, the prompt, complete and satisfactory recoveries have followed this technic.

Cases of pyemia following simple opening of the sinus and turning out of the clot, without dealing with the jugular, have been my experience.

Some very few cases of undoubted lateral sinus thrombosis have recovered without surgical interference, in which cases my impression is that benefit has followed the heroic use of streptolitic serum, but such experiences are so woefully few that they should not be allowed to

cloud the issue, which should always be viewed as a purely surgical proposition.

DISCUSSION

DR EMIL AMBERG, Detroit: Doctor Campbell's precise statements give a vivid picture of the pathological conditions found in sinus thrombosis. Sometimes the diagnosis is easy. If we have before us an obstructing thrombus when the sinus is laid bare, there cannot be much doubt about the diagnosis. If there is only a parietal thrombus, the diagnosis by sight may be difficult. The blood count is of assistance. It must be considered from the standpoint of differential diagnosis that in certain types of meningitis the blood count shows a much larger number of leucocytes than are found in sinus thrombosis. As the essayist mentioned, a positive blood culture is of help. The same patient at different times may show absence or presence of microbes in the blood. The character of the temperature, septic or pyemic (Doctor Blake called the latter "Church-steeple" temperature), the occurrence of chills, headache, a peculiar mentality, changes in the fundus of the eye, oedema in the region of the emissary vein, tenderness on pressure along the jugular vein, the cordlike resistance on touch, etc., all these are helpful diagnostic signs. Considering chills and temperature, I should like to call attention to the well-known fact that a perisinous abscess may show these clinical signs. Politzer mentions this.

The question whether and when the jugular and contributory veins should be tied, or whether the vein should be excised, is a very serious one, which is not by any means solved for cases of all types. There may be changes which leave little doubt about the necessity of tying the vein. Some go so far as ligating the jugular vein immediately after the lateral sinus has been injured during an operation by a contaminated instrument. The good results compared with the fatal results which have occurred in a certain hospital have made procedure a rule in that place. On the other hand, many a time a sinus is injured and no bad results follow. I think a free hemorrhage may suggest expectant treatment. It may be well to change to clean instruments in the neighborhood of the sinus.

It has been claimed that a sudden infection finds the body less resistant than a slowly progressing process. This seems to be especially true in meningitis according to Dyer. The latter also claims that in sinus thrombosis it is very important to consider that pus under pressure is followed by bad consequences. Some claim good results by simply tying the jugular vein, even if a thrombus is present; others have seen bad results following this procedure.

Thus we see that much work must be done in order to come to a clear understanding of the situation. The ligation of the internal jugular vein is not entirely free of danger.

Heine's views on the subject matter are very illuminating. He mentions a case in which he thinks that ligation of the jugular may have caused the propagation of the thrombus into the inferior petrosal sinus. He states that danger to life can be caused by sudden stasis in connection with the defective outflow through the vein. He says that Rohrbach reported a case in which the left internal jugular was ligated on account of carcinomatous glands in the neck. The patient did not regain consciousness after the operation, and died on the sixth day. The postmortem revealed a necrosis of the brain caused by stasis on account of an abnormal narrowness of the transverse sinus and internal jugular vein on the healthy side. I show you a specimen taken from the cadaver which illustrates a similar condition, and which I described in the New York Medical Journal, September 9, 1905.

The attempt has been made to attribute psychopathic conditions to the unilateral narrowing of the jugular foramen. Kasloff found in 21 skulls of patients suffering from suicidal mania these narrowings more or less developed. Rickets and asymmetry of the skull must be taken into account. If the vein is abnormally wide Linser claims that the parietal suture should be done. The ligatures

should be made as far as possible from the base of the skull. The bandage should not compress the mastoid emissary. This of course refers to general surgical patients.

To summarize, it can readily be seen that sinus thrombosis is a serious condition which does not allow much delay of surgical interference, especially. Chills, pyemic or septic temperature before or after a mastoid operation deserve closest attention. The Roentgen ray may be useful in differentiating a sinus thrombosis from a central pneumonia. Typical cases are not very difficult to be diagnoses; a typical cases require great diagnostic efforts. In simple cases the prognosis after surgical interference, which is the only treatment, is, as the essayist has reported, rather favorable; whereas in cases accompanied by complications it is of course less favorable. The ligation of the internal jugular vein and one or the other of its branches is a procedure which is generally followed at present. The omission of this procedure requires well defined reasons. Surgical interference with the jugular bulb is gradually becoming more employed. It may be useful to know that the most prominent portion of the lateral sinus, in adults may be more easily found by following the lateral sinus line.

DR. A. E. BERNSTEIN, Detroit: I do not doubt that there are certain cases which require ligation of the jugular and exenteration of the sigmoid sinus, but I do not believe that the indications for doing that are as clear cut as we have been led to believe. That may seem absolutely heretical to most of us, and especially those who have had training in the Berlin school and have followed the work of Whitmer and those men in New York. As justification for saying that I know that most of the jugular ligations that have been done were done prior to the last ten or twelve years. I have had some mastoid work to do in my time. In the last ten years I had three deaths out of the number of mastoid operations I have done. One case (in which Doctor Amberg was associated with me) was a meningitis after a mastoid operation, and there was no indication of sinus thrombosis.

In talking to Doctor Bloodgood several years ago, he said, "You otologists have a way of going in and ligating the jugular for thrombosis which does not seem to me clear cut. We frequently have thrombosis of the saphenous vein following abdominal operations, in which case we do not interfere with the saphenous vein, and the patients get well."

On the other hand, I have had cases—I had one case within two years, in which after opening the mastoid I found the sigmoid sinus almost bare—the sigmoid filled with pus, and it looked to me as if I must go in and tie the jugular. I did not do it because the patient came in at a late hour and was weak, so we decided to postpone it. That seemed the most clear cut case I had, except one five or six years prior. The girl, 14 years of age, got along very well the next day, but three days afterward began to complain of pain in her joints. I thought this was thrombosis and sepsis, but she got perfectly well without any further interference.

When you have a closed off thrombus in the sinus it seems to me there is no reason for surgical interference, because you are going to do again lower down what Nature has already done for you. She has walled off the infection as well as she can, and when you tie the jugular you simply make a thrombus lower down.

DR. ROY B. CANFIELD, Ann Arbor: I would like to discuss one point in Doctor Campbell's paper, and that is the handling of the jugular vein. There are two schools in respect to this question—the Boston school that does the ligation and stops there, and the other school which advocates a radical resection of the vein. Cutting out all the "bunk" and attempting to discuss the question intelligently, we have the matter of setting this patient free from the certain dangers of pyemia, and we are seeking for a proper and conservative method of bringing about that result which seems to me to be the Alexander method. He ligates the vein at as low a level as seems worth while, ligates a section of the vein, turns up the lower end of the upper fragment to the skin where he sews it. Then he inserts a wick of gauze into the vein, the ligature holding the gauze

in place. At the end of three or four days you can thoroughly syringe through the vein and remove the mass of infected blood. You then have the whole thing where you can handle it easily.

The great trouble is that so many otologists who do not do much of this kind of surgery, when confronted with a case with serious complications, try to do something and do not quite finish it, and the patient dies of pyemia. It is a simple problem with this old Alexander method. The incision is short, the scar is insignificant, and a radical resection is not necessary, because even with the most radical resection there is left a segment of the old sinus, the lower end of the upper fragment of the vein which is not reached, and which sooner or later begins to suppurate into the neck, and probably gets well by the sterilization of the cavity.

CONSERVATION OF THE SAC IN DACHRYOCYSTITIS*

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In the treatment of disorders of any organ of the body, that method is best which accomplishes a cure with the least possible disturbance of the organ and its function.

In the treatment of dachryocystitis, some of us, in the search for novelty, if not notoriety, seem to have departed a considerable way from this sound surgical rule.

It is my purpose to call attention to an older method with some refinements of technic which in my hands has produced results most nearly in accord with the rule just cited.

Dachryocystitis is a catarrhal disease of the lachrymal sac, varying in severity from an accumulation of tears and mucus, which can be pressed down into the nose or back into the conjunctival sac, up to an impervious stricture with a violent phlegmonous inflammation with true abscess formation.

The milder forms may yield to simple treatment but, if these are not successful, surgical measures must be used and their choice will depend somewhat on the existing type of the disorder.

That the disease has been considered an important one among eye disorders is shown by the fact that Galen, as early as the third century, proposed breaking through the lachrymal bone, keeping the opening patent with caustics to cure a weeping eye.

Celsus, over eighteen hundred years ago, recommended the treatment of lachrymal fistula by cauterizing down to the bone.

Extirpation of the sac was mentioned by

Platner in 1724; Rosas in 1850; later by Alt and DeWecker.

Berlin brought it forward in 1868, and since then many kinds of operations have been recommended.

Etiologically the disease is of bacterial origin with probably a majority of writers locating the source of infection in the nasal chambers.

Personally, I think the weight of argument is against the origin being most often from below, but rather from above, for the following reasons.

In favor of germs entering from above are first; capillary action which draws fluids from the conjunctival sac; second, the pumping action on the canaliculi by the tensor and orbicularis muscles; third, the action of gravity, all being assisted by the valves, at the top and bottom of the ductus, with an extra valve, frequently, between them for good measure. These valves are placed where they oppose movement of fluid from below upward; fourth, the downward current of fluid is assisted by the ciliated epithelium which is found in the ductus; fifth, the location of the lower end of the ductus is unfavorable for penetration from below; and sixth, there exist so much greater numbers of diseased noses, without lachrymal infection than with, as to indicate a decided resistance to infection by this route.

The most frequently occurring infecting organisms are the pneumococci, then streptococci, next staphylococci, and then any of the pathogenic organisms beside, which may be found in the conjunctival sac.

Colon bacilli, bacillus influenzae and Friedlaender's bacillus usually accompany cases in which they are found also in the nose.

Stricture is most often found in the part of the bony canal, at the bottom, which is entirely surrounded by bone, and which we often fail to remember is only about a quarter of an inch long.

We frequently get the sensation of a stricture, when passing the probe, just as it leaves the bottom of the sac and enters the ductus, which is caused by a fold of the membrane or by the physiological placement of the duct at one side and above the bottom of the sac.

Treatment of this disease has followed three lines, namely, probing, extirpation of the sac,

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and diversion of its outlet through the wall of the nose. Following Bowman, men for years tried to cure these cases, without division of the canaliculus, with probes whose size was limited to what would pass through the punctum. A few mild cases recovered by this method but they were mostly those which would get well in time with very mild astringents.

Failure from the small probes led to the introduction and wearing stylets of lead wire or hollow cannulae of silver or gold, neither of which were satisfactory to the patient and only enabled the doctor to get rid of a patient he had grown tired of seeing about his office.

Theobald advocated the use of much larger probes requiring for their introduction the preliminary slitting of the canaliculus. These were an improvement, but something was still lacking in technic.

The presence of an infected sac is a constant source of danger to the eye, and is particularly dangerous to the wounds of a cataract or iridectomy, so that any measure which would insure disinfection was welcome.

Extirpation of the sac was hailed with enthusiasm and practiced so widely that its drawbacks were soon manifest.

Indications for removal of the sac generally accepted are, first, unwillingness or inability of the patient to submit to a course of probing which may fail in the end, second; evidence of recurrent attacks of dachryocystitis; third, necessity of some operation requiring opening of the globe; fourth, persistent, resistant corneal ulcer; fifth, failure to cure by long probing.

If the advocates of extirpation who claim 90 per cent cures could show the patients with as good average results as an equal series of properly managed probe cases can show, there would be no chance for argument, but unfortunately the picture is not so rosy.

Extirpation leaves all patients with eyes which weep when in the cold and wind, and some of them are so constantly annoyed as to render removal of the lachrymal gland necessary, and this leaves them with an eye which frequently lacks sufficient moisture for physiological needs.

These people have watery eyes at all times, are continually annoyed by the tears which

overflow the lid, excoriate the skin and cause more discomfort than did their previous blennorrhoea.

Failure to destroy every part of the sac, ductus and canaliculi induces continuance of the old suppurative condition so that most operators doing extirpation were glad of a suggestion which could provide drainage without the risks of failure in extirpation.

About 1904 Cirincione first practiced anastomosis of the sac into the nasal cavity by dissecting the sac and ductus free below and up to the calaliculi, then boring through the nasal wall, tucked the sac through the opening.

This had the effect of draining the sac into the superior rather than the inferior meatus and when successful this is a better operation than extirpation.

The simplest measures which give equal results are always best, and I come now to the description of a method of probing which was brought to the notice of the profession at the meeting of the A. M. A. in Detroit in 1892, by Dr. Irwin of Mansfield, Ohio, which I have practiced with much satisfaction ever since.

Reasoning from analogy with urethral stricture, Dr. Irwin introduced a probe pointed knife with flexible shaft which, after slitting the canaliculus, he passed through the stricture. Then while at the bottom in the nose he rotated the knife on its shaft 90 degrees and pulled it back through the stricture without withdrawing it from the sac.

Rotating again another 90 degrees he pushed it in once more and completed the circle of 180 degrees, when he drew it out.

He next passed the largest Theobald probe which the bony canal would accomodate, commonly numbers 14 to 18 in men and 12 to 14 in women.

The large probe is passed on the second day and after that I commonly choose one size smaller and pass that daily for a week, then alternate days for the next week.

The third week I pass the probe once or twice as indicated and in fully 75 per cent of the cases this is all that will be required for the cure.

In the few remaining cases up to fully 95 per cent an occasional probing may be necessary over a longer period of time, but nothing else is necessary to a complete cure. Of the other

five per cent it may be necessary to resort to anastomosis or extirpation if for any reason suppuration of the sac persists, which in my experience has not happened in but a single case.

Having tested syringing with boric acid solution, normal saline and various antiseptic solutions, and carried a long series of cases without syringing, with equally good results, I have abandoned it as not essential.

Recently I used mercurochrome in a few cases and thought the suppuration was somewhat shortened, but the number is not large enough to be sure that it is an improvement of decided value.

When the sac is acutely inflamed and swollen so much as to make it practically impossible to enter the sac through the canaliculus, I commonly evacuate it with a narrow knife and keep the opening patent a day or two with a wick until external applications of moist heat so reduce the swelling as to make the canalicular route practicable.

After slitting the punctum I find it an advantage to rotate the knife until the cutting edge is downward and divide the ring where the two canaliculi unite with the sac.

This facilitates the passage of the stricture knife and the large probes and it will remain open with the daily probing until the case is completed.

Any complications from nasal or sinus disease will need appropriate treatment, but when you once establish bottom drainage your case of cystitis is well even if the nasal disease is not fully so.

My cases are almost all done under local anaesthesia. After instilling cocaine in the lower cul-de-sac I inject the canaliculi with cocaine, through a hypodermic syringe needle with its point broken off and rounded, which serves the double purpose of an anaesthetic and tells you whether there is stricture, because, if there is, the fluid returns through the upper punctum as fast as it enters.

After a five minute wait the slitting of the canaliculus is painless and the contents of the sac are easily evacuated upward into the conjunctival sac.

The lachrymal sac is then distended with a cocaine and sometimes adrenalin solution and a suitable wait will make the balance of the cutting and probing either painless or so nearly so that there is no difficulty in getting the patient to continue.

After the first day the pain is a vanishing quantity up to the end of the case.

On account of the variation in the size and direction of the lachrymal canal it is sometimes

difficult to pass the stricture knife, and this is especially true of small probes. The large probe is free from this danger because its blunter end will slide over a mucous fold which would catch the small probe and make a false passage almost certain to happen. A little preliminary study of the type and facial contour of your patient will greatly assist in locating and determining the direction of the passage and a very few cases will make you facile and handy in it.

In conclusion: It is far easier to induce the patient to submit to a simple procedure which bears the least resemblance to an operation, than to get him to consent to an operation, like extirpation of the sac or anastomosis, which if thorough is far from being simple or a minor operation.

Extirpation condemns the most of patients to a life of almost constant annoyance from watery eyes which may be serious enough to necessitate another formidable operation, the extirpation of the lachrymal gland, which only substitutes one disability for another, giving the patient an eye which is too dry in exchange for one that is too wet.

I feel sure that none of you who know all the advantages and disadvantages attendant on each of the kinds of treatment advocated would hesitate in selecting probing if you were the patient, and you have no right to ask your patient to take chances you would yourself reject, if your places were reversed.

Anastomosis is better than extirpation so long as the opening into the nose remains patent, but cicatricial contraction is likely to require the frequent use of a probe in which case the case is no better off than one probed through the natural channel which is classed among the partial failures.

DISCUSSION

DR. W. G. BIRD, Flint: I agree with the Doctor as far as extirpation of the sac is concerned. I always consider that operation a last resort because I do not like to have the troublesome sequelae that usually follow, and I do not like the external scar. The objection to probing is that if you use small probes they do little good, and if large probes are used it is necessary to slit the canaliculi, and the passing of the large probes usually causes considerable pain. When you slit the canaliculi you destroy the natural drainage of the lacrimal system. As I understand it, the palpebral ligament is attached to the anterior and the temporal side of the sac, and the act of winking contracts these ligaments causing the sac to dilate and at the same time causing a vacuum in the sac. The puncta feed into the internal canthus of the eye where the tears collect and suck this fluid into the sac. If the canaliculus is slit it is impossible for the process to be carried out.

I do the West operation—internal drainage operation—whenever a case presents itself that I think should be operated. It is an ideal operation in dacryocystitis because you get immediate drainage of the pus into the nose and your pain and inflam-

mation subside at once. Of course in those cases it is necessary to use a general anaesthetic. There is no more shock with this operation than the ordinary submucous resection, the patients do not object to it as much as passing a probe, and the success seems to lie in the fact that the sac is well exposed and as large a portion as possible removed. It is necessary sometimes, if you have a very narrow nasal passage, to remove the pendulous portion of the middle turbinate on one side, and sometimes to do a submucous resection of the nasal septum; but of course these cases are rare. After this operation, where there are troublesome granulations, a little nitrate of silver applied twice a week keeps these down. The main thing is to get a large enough opening so the tears will pass through, which helps to keep the opening into the nose patulous.

The best cases are those that have never been treated. My procedure is to syringe out the sac. If the fluid does not pass into the nose I pass a very small probe, a No. 3 or 4, and if this does not pass readily into the nose I suggest a nasal operation and usually get the consent of the patient.

The after treatment does not amount to anything. A few washings out with a lacrimal syringe finishes the treatment. We have no external scar, no pain, and a satisfied patient as a rule.

In cases of dacryocystitis complicated with corneal ulcer, or in cases where the eye must be opened, as in cataract, it is an ideal operation. The flow of pus is stopped at once and after a week's time you can go on and do the operation on the eyeball without fear of infection. Then the natural drainage is left intact.

DR. GEORGE M. WALDECK, Detroit: Doctor Campbell of Detroit has recently done some very nice work in the lacrimal sac, injecting bismuth paste with the idea of ascertaining the location of the structure and the size of the bony canal. This has brought out some interesting things, especially as to the variation in the anatomy of the bony canal. They then have modified the West operation to a certain extent, in that they pass a probe through in the ordinary way, a specially devised probe, one with which they can force a way through the nose. Then they enlarge the opening around the exit of the probe and with another smaller instrument catch the end of the sac and bring that into the nose. Doctor Campbell recently read a paper in which he stated that the results have been really very gratifying.

I believe we have a new field here in the treatment of the lacrimal sac, and while I do not think that we have by any means covered the ground, it is a great advance over the old extirpation.

DR. ALBERT E. BULSON, Jackson: I agree with Doctor Baker in the treatment, largely, but we must consider the different phases of this lacrimal occlusion—acute, sub-acute and chronic. With acute dacryocystitis there is usually invasion through the nose and up through the duct, and local treatment of the nose with perhaps syringing of the duct will complete a cure. But where we find a case of sub-acute dacryocystitis that has run perhaps for several months, my invariable practice is to slit the canal and put down a good-sized probe. I remember Doctor Noyes of New York said, "You have to open the door before you can go through in these cases," and that is true. First I slit the canal, and of course this is a delicate operation, requiring a good deal of care just how to slit the duct. Then I put in perhaps a No. 11 Theobald probe. Invariably you will find stenosis through the duct, but break it down. In my slitting of the canal I use a Noyes Knife to go out through the duct, then put in my probe.

The Doctor recommended probing perhaps every day for a time, or every other day, but I find in my experience that after the second probing the patients get very much discouraged, and even though you are successful and they are satisfied, they dread it and rebel against the probing. Of course I always use a local anaesthetic, but they suffer a little, so I drop from a No. 11 to a No. 5 or 6 probe and only probe about twice a week, gradually lengthening the time to once a week or once in two

weeks. I have some cases that have gone ten years, but who occasionally come in to have a probe introduced.

I think I was one of the first to advocate the removal of the gland. I remember advocating it before the Tri-Medical Society at Fort Wayne, Ind., and they thought it was a good suggestion. But I have found that you are simply making a bad matter worse. We have a dry eye, but certainly it is better for the patient to have a wet eye. So in my own personal practice I have abandoned the idea of removing the gland. I have never attempted the extirpation of the sac and have never believed in it. Therefore I rely wholly on probing. I believe it is the treatment, but remember, a large probe to start with and then taper down until you get at least to No. 3. Occasional probing will complete the cure.

DR. GEORGE E. FROTHINGHAM, Detroit: I wish to make a point that I think is rather important. Of course we have to select our cases in deciding on the operation we will do—the operation is according to conditions found. One point I have not heard mentioned that I think is rather important, and that is, in slitting the canal where do you do that operation? I have noticed a number of cases where the slit is carried along the upper margin of the lid. I think that is a mistake. The slit should be made so that when the slit is open afterward it lies against the eyeball instead of on the upper edge, and in that way you do not lose the power of suction.

DR. HAROLD WILSON, Detroit: It seems to me there are two classes of cases—those that get well and those that do not—and in our reasoning on the theory we are apt to confine our thoughts to those who get well and our judgment may be warped accordingly.

We have those who are in favor of extirpating the sac, those who are in favor of the endo-nasal operation, and those who are in favor of probing. From the fact that there is a considerable variety of endo-nasal operations to choose from it is evident that none are precisely adequate and satisfactory. From the fact that there are people who do not extirpate the sac, it is obvious that that is not the complete solution. From the fact that there are those who do not rely upon probing, it is evident that does not solve the problem entirely. So much for a logical analysis of the situation as it exists today. My convictions is that there are just as many patients who do not recover under one system of treatment as another, because each method has its own particular difficulties. Extirpation of the sac does not necessarily result in a weeping eye, and does not necessarily result in a perceptible scar. Probably those who have extirpated the sac could show many clean cases in which the scar is almost invisible.

The knife that Doctor Baker showed is very satisfactory, if one is compelled to use a knife.

I am perfectly satisfied that if an ophthalmologist had a chronic dacryocystitis and was subjected to probing two or three times a week with a No. 10 or 14, or even a No. 4, he would prefer to have the sac extirpated and take the chances on getting along very well, and when Doctor Bulson says there is not much pain he speaks largely as the man in the pulpit speaks of original sin—without much personal experience, that is, from the standpoint of the patient. It seems to me that on theoretical grounds there is no approach so satisfactory nor one from which we have better promise of excellent results, as the endo-nasal route. It is thoroughly sound anatomically, it is a comparatively easy bit of surgery, and although we are laboring under difficulties and the results are apt not to be permanent. I am well satisfied that as a matter of surgical technic, no matter whether they all get well or not, they have an easier road to get well.

DR. WALTER R. PARKER, Detroit: It seems to me that the question of whether or not the punctum should be opened depends upon whether it is normally located. If the punctum can function perfectly, it should not be incised; if it is not in its proper anatomical position than it should be incised. As the cases come to us routinely I think we can

resort to probing for a reasonable length of time. We all know there are certain cases that get well in a comparatively short time under probing. I speak now of the cases of chronic dacryocystitis in adults. If after we have probed for a reasonable length of time, perhaps a month or six weeks, and have not made any perceptible gain, then I think we have to resort to one or two procedures. When we have used a probe up to a No. 10 or 12 then I am inclined to think that the Ziegler rapid dilatation method will clear up a certain proportion of these cases. It is true it breaks the lacrimal vein, but it will clear up some cases that simple probing will not cure. Failing in this, my own preference is for extirpation of the sac. I am still old-fashioned enough to extirpate the sac. There are secreted normally about six or seven minims of tears a day. If there is no chronic conjunctivitis present the patient will not have a serious overflow of tears after the extirpation. If there is a chronic conjunctivitis they will have a troublesome epiphora in emotional periods, and of course the overflow will be on the cheek.

I hesitate to speak about the so-called internal operation. I have had no experience with it, but Doctor Martin of Harvard says it is no good. After doing a large number of cases, only a comparatively small number got along without probing, even though the window is made. In his words, it is easy enough to make the window, but almost impossible to retain it.

DR. HEMAN GRANT, Detroit: I would like to mention dacryocystitis in young children. There is a little procedure we can follow in these cases that helps somewhat. In about 75 per cent of my cases of acute and sub-acute dacryocystitis in young children, babies and infants, simple massage of the sac followed by the instillation of argyrol will make an end to the condition. The other 25 per cent which go on to a chronic condition I would like to have brought out in the final discussion.

DR. A. E. OWEN, Lansing: Like the most of the men who do eye and nose work altogether, when West came out with his paper on the internal operation, I became enthusiastic. Doctor Bird did one or two here and told me how he got along, and then I began. I have done six or seven of these cases, but I had good results in only two of them. The rest of them I have had to do the same thing the rest of you do—probe and wash out, etc. I think perhaps West can do the West operation, but I believe there are very few men who can do it. It is easy enough to talk about this thing or going in there and making a window, bringing down the lacrimal sac and making a nice operation of it so you have an open canal, but it is another story to do it, and while I thought I did it, many of mine closed up. I think the rest of you if you are honest will say you have had much the same experience. Perhaps some of you are more skillful than I am. The last few cases I have had I did the same old thing I always did—extirpate the sac.

I also think that very few extirpate the sac. You think you do, but some of the best operators I have seen agreed with me that they did not extirpate the sac. A little trick I learned a few years ago has helped me—after I think I have done a good operation I use acetic acid and do not close it.

DR. HARRY S. GRADLE, Chicago: I saw West do a good many of his cases, but I am not very keen about the operation. I tested out the Toti operation, and in about 40 per cent of cases the tear duct remained open. In Vienna we did the extirpation of the sac, but I do not believe that in 25 per cent of cases after extirpation we had a patulous canal. I think we are on the wrong tract. We are interfering with physiological function by making a new pathway which will never allow the performance of the act of drainage of the tears. We must understand the tear sac drainage first, and there is where we are not perfect. Whether it is suction that delays action, we are not sure. Whether it is capillarity, or due to some epithelial condition within the sac, we do not know, and until we do know I do not think a proper method will ever be devised. I am firmly convinced that at present we are not treating the tear sac in a way

that is conducive to physiological function. A certain number of cases will clear up under mild probing; but those that will not clear up, what are we going to do? In the first place, extirpation of the sac is the only logical procedure, because as has been shown us, we have not a smooth passage through the sac, but we have a tear sac with innumerable small diverticuli extending upward and outward, and until we can smooth up these diverticuli or eradicate them completely, we cannot clear up the condition. On the other hand, extirpation of the sac is accompanied so often by closure of the sac. What can we call a successful case—a patulous canal? No. A canal that functions. The operation that Doctor Waldeck described is very similar to the one that Drs. Weiner and Sauer of St. Louis have been doing for some time, and which is very successful for that operation. I believe Von S— started us in the right direction by the injection of barium into the sac, the X-ray showing us more or less the location of the stricture. If you do that and take stereoscopic pictures, you will get a far better picture of the anatomy of your tear sac than by any of these instruments.

I am not satisfied with my tear sac cases; I do not think I am doing them very much good. I have used the negative pole, galvanic current, but have not had satisfactory results. Of course there are certain emergencies that necessitate operation and immediate removal. But it is each one to his taste until we do find some method to restore the physiology of the tear sac.

DR. CHARLES H. BAKER, (closing): Taking the discussions in order, I want to state first that slitting the canaliculus will not necessarily interfere with the physiological function. The location of the slit has a great deal to do with the results. If your slit is made pretty far back toward the conjunctival surface rather than toward the skin surface you get apposition of the edges of the slit to the eyeball, which is the central part of its function when the punctum is intact. Furthermore, you will frequently find after slitting and a series of probings, if you do not see the patient for a few months, that the edges of the slit have reunited and the duct is practically normal.

I think those people who have had failures in probing have had these failures because of the reason Doctor Bulson mentioned. He starts with a big probe and then when the patients get discouraged he slips down to a small probe. There is the crux of the whole matter—the probing of these eyes. You must stick to the largest probe that will pass through the bony canal without damage to the membrane. In some cases with the Teutonic type of head and a very large canal, where you can pass a No. 20 Theobald probe, why go down with a No. 12 or 6? Why not stick to a No. 16 or 18? You have a membrane which is irritated and which lies in folds. There is a tendency to hypertrophy and infiltration, and if you pass a large probe you soon have that membrane squeezed dry. The tendency is then to reform a more normal condition of the lining of the canal. I do not think any man by any other method of operation can show a higher percentage of cases that do not require after-treatment than can be shown if you follow consistently the large probes.

Doctor Gradle spoke of the use of negative electricity. Years ago I tried this and it seemed to be beneficial, but the reaction in some cases was positive, and when I came to check up I found I did not get much better results. I have had some experience with the various antiseptics and astringents, but I did not seem to get any better results. The important thing is to pass a large probe and pass it frequently, every day for at least a week, and perhaps the second week, although the majority usually require it but one week, and 75 per cent of the cases will be cured by the end of the third week.

In regard to infantile cases, these cases are due to retention of secretion within the sac at the bottom, probably an imperforate membrane at the bottom, and the passing of even a small probe will cure it. Once a natural passage is made the tears will continue to pass through and the case will soon be cured.

PUBLIC HEALTH EDUCATION

The function of the Joint Committee representing the University of Michigan and the Michigan State Medical Society is to present to the public the fundamental facts of modern scientific medicine for the purpose of building up a sound public opinion concerning questions of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect, or theory of medical practice. It will send out teachers, not advocates.

VIII.—PHYSICAL EXAMINATIONS (Continued)

WHAT IS A PHYSICAL EXAMINATION?

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To be of any value whatsoever, a physical examination must be thorough and painstaking. Furthermore, the examiner must be an expert. Not only must he be adept in determining whether organs and tissues are in order or out of order through the skillful utilization of the simple methods of physical diagnosis such as inspection, palpation, percussion and auscultation; but he must be acquainted with the numerous laboratory methods, now at our command, which aid in making and in many instances determines the diagnosis. Blood counts and blood chemistry, Wassermann, urinalysis, kidney efficiency tests, protein sensitization, bacteriological and serological methods and analysis of various bodily secretions and excretions must be utilized at one time or another in order to make the diagnosis accurate and complete. Furthermore, the physical examiner should know when the X-ray, the electrocardiograph, the polygraph and basal metabolism determinations are of service in determining man's physical condition. Of course, it is not expected that all these methods and instruments are to be used in every physical examination. On the contrary, certain methods will be utilized only when the general subjective and objective examination reveals or suggests beginning abnormal changes that require further study by means of precise methods in the hands of specialists. Moreover, it cannot be anticipated that the general examiner should be able to go into the laboratory and make for himself these various tests. Specially trained men are required for special methods and for utilizing special instruments. The general physical examiner should know, however, when these are required and appreciate fully that in many instances the laboratory alone can detect early regressive changes such as the degenerative group of diseases.

To be able to make an efficient physical examination from the standpoint of preventive medicine and to be able to detect early beginning retrogressive changes, require on the part of the examiner un-

usual scientific training and experience. In fact there is no other branch or phase of medicine that demands so thorough and so broad training. Medical schools should give this specialty—physical examinations for health and physical efficiency—an important part in the curriculum, for it promises to be a most important phase of future medical practice.

But the physical examination is only the beginning of a program for the individual health promotion. The findings must be interpreted to the individual in such a way that there will be, on his part, a lucid understanding of and a deep appreciation for the prevention of retrogressive changes or the correction of beginning abnormal alterations.

Furthermore, records must be kept of these examinations. The findings of each successive examination should be appended to the records of previous examinations. In other words, a continuous health record beginning with childhood should be the priceless possession of each individual. During the school age, this record should accompany the scholastic record from kindergarten to the university.

Just what should be included in the standard physical examination is best stated by quoting from the Life Extension Institute, which has done far more than any other life saving agency to develop the "preventive medicine" features of physical examinations.

"The Standard Examination is the foundation of the survey and determines the need for special research beyond the usual routine of the Unlimited Service. The Standard Examination and Service cover the following features:

"(1) Examination of the Eyes, Ears, Nose, Throat, Mouth, Teeth, Lungs, Heart, Circulation, Blood Pressure, Skin, Glands, Stomach and Abdominal Organs, and general bodily conditions, chemic and microscopic examinations of the urine, Hemoglobin blood test for anemia. (Other special details are covered in the examination of women and children.)

"(2) A study and review by our Medical Staff of the daily living habits, personal and family history, activities, past illnesses, and any other information as to physical condition and health problems which the subscriber may care to submit to us for consideration in connection with the physical examination.

"(3) Four urine examinations a year, chemic and microscopic. The Institute will send special containers for these urine specimens.

"(4) Confidential detailed reports following a careful study and review by the Institute's Reviewing Staff of all the papers assembled in the case.

"(5) Suggestions for corrections of errors in personal hygiene.

"(6) Suggestions as to proper diet, with appropriate diet lists.

"(7) Instructions covering appropriate exercise, with diagrams.

"(8) Other general suggestions and hygienic guidance.

"(9) Mid-year questionnaire calling for a statement from the subscriber covering any changes that have occurred since the examination and as to the need of any additional hygienic counsel and guidance.

"(10) Educational health literature, including appropriate Keep-Well Bulletins and the Institute's monthly journal, "How to Live." These bulletins cover suggestions for healthful living and personal hygiene generally, that is, eating, drinking, sleeping, working, play, exercise, posture, fresh air, etc., and timely information regarding the care of the mind and body.

"(11) Educational Department of the Institute. Members have the privilege of communicating with this department at any time for general information relating to personal hygiene and disease prevention."

FREQUENCY OF PHYSICAL EXAMINATIONS

Just how many examinations are essential in the life time of an individual in order to assure his health and physical efficiency must vary. No fixed standards can be put down as to how often physical examinations should be made. Age, state of health, intelligence of the individual, illness and occupation are factors which should determine, in a large measure, when examinations should be repeated.

With a view of establishing an economic and scientific basis for physical examination of school children, the New York City Department of Health set out to determine the age and sex incidence of the occurrence of physical defects in school children. The purpose of the study were to determine (1) "When physical defects occur; that is, at what age they may be found for the first time. (2) How many physical examinations are necessary during the school life of the child. (3) When physical examinations are most necessary in relation to the age of the child." With a view of answering these questions, the Bureau of Child Hygiene of the Department of Health of New York City, in 1909, analyzed the physical defects found in a total of 356,292 children who had been examined. In 1921 a similar study was made of 139,770 children of age groups. The sex and age groups were 6-8 years, 8-10 years, 10-12 years, and 14 years and over. The prevalence of such common defects in school children as defective hearing, pulmonary disease, cardiac disease, nervous disease, defective nasal breathing, hypertrophied tonsils, defective vision, defective teeth and defective nutrition were tabulated for each of the age groups. The interesting summary and conclusions are as follows:

"In analyzing the results of this study in physical defects found in school children, the following points seem worthy of emphasis:

1. The less common and more chronic physical defects such as pulmonary disease, cardiac disease and nervous disease remain at about the same level

throughout school life, and are apparently influenced little if at all by the school environment.

2. Defective hearing and defective vision show a steady and persistent increase from the entering age to the leaving age throughout the school life of the child. In the case of defective hearing, however, the increase is relatively small; in the case of defective vision, the increase is more marked.

3. Malnutrition, defective nasal breathing (implying the presence of adenoids), hypertrophied tonsils or diseased tonsils and defective teeth show their highest incidence either at the entering age or at the eight to ten-year period, thereafter showing a fairly persistent and regular decline.

4. While the incidence defects in all age groups is lower in the 1921 study than in the 1909 study, the relative age incidence remains approximately the same, the percentage of defects found at each age bearing about the same relative position in both studies.

5. The physical examinations and follow-up work for school children in the years intervening between 1909 and 1921 have evidently reduced the total number of physical defects, with a resultant raising of the health standards of the children examined. They have not, however, resulted in a change in the relative age ratio of the physical defects encountered.

CONCLUSIONS

"The conclusions reached as a result of this study are:

1. The most important physical examination to be made in the school life of the child is the one occurring at the time the child enters school for the first time.

2. In order to make the work of health supervision of school children effective, a complete physical examination of each child should be made before eight to ten-year period. If this can be done with 100 per cent efficiency, combined with follow-up that is 100 per cent effective and 100 per cent of treatments obtained, it should not be necessary to make regular physical examinations after the eight to ten-year period, reliance being placed after that time upon the routine inspection of the children in the classroom. This routine inspection will permit the nurse, doctor or teacher to pick out the cases of physical defects that have been in any way overlooked during routine physical examinations or which have originated after the eight to ten-year period.

3. An annual test for defective vision is desirable.

4. Unless the amount of money appropriated for school medical inspection is large enough to allow a complete and thorough physical examination each school year, the officials in charge of such work are not justified in spending any money in having physical examinations made after the eight to ten-year period unless the full health needs of the children below that age period have been met.

5. A logical deduction that might be drawn from this study is that great emphasis should be placed hereafter upon the pre-school age period as the time when physical defects should be prevented or corrected.

6. To sum up the matter, this study would seem to show that the expenditure of time and money to make annual physical examinations of school children is not warranted and seems to be unnecessary. Analysis of the age and sex incidence of physical defects in this study shows that proper and adequate physical examinations made in the early life of the school child—that is, before the 8 or 10-year

period—are essential, and if these are properly followed up and suitable treatment obtained, the appropriations for this work will be spent in the most economical way, the child's health will be more thoroughly protected and future disease and the sequelae of physical defects be more adequately guarded against than by any of the present methods of school health supervision.

From this extensive study it is readily seen that the most important age period for making a thorough physical examination, so far as school children are concerned, is at the time that they enter school. Furthermore, we learn that with the possible exception of a marked increase of defects of vision during the school period, practically all the defects are present at the time the children enter school. Therefore, a thorough "over-going" is essential in an earlier age period of life. In fact, the first six years are the most important and there should be a series of examinations accompanying the growth of the infant, the acquisition of new functions and the development of new structures. The wise parent will see to it that the baby maintains its proper weight and growth and that the joints and bones are functioning properly when the child begins to walk. Furthermore, the mother will be concerned with the throat with a view of removing tonsils and adenoids which later on may cause the damaged heart. She will know the age periods when the temporary and permanent teeth appear and "see to it" that they are properly cared for. Each infectious disease of childhood and the convalescence therefrom will be carefully guarded by the physical examination.

To summarize then, early infancy should be characterized by a series of physical examinations accompanied by proper instructions to mothers as to prevention and correction of the defects which are so prone to make their appearance in early life. A thorough physical examination should be made of each child when it enters school and the defects should be corrected. Annual inspection of school children may well follow with particular reference to weight and growth, to posture, to the teeth and throat, to vision and to the general state of health. The annual inspections may well be made by the school nurse or the school health director.

The next age period in life when a thorough over-going should be made is during early adulthood. Let us say from 18 to 20 or 20 to 22 years of age. Universities are beginning to require of all their entering freshmen this thorough physical examination before registrations are completed. Physical examinations are of especial value to the young man and young woman beginning their life work. Just how often these should be repeated depends in the very largest measure, on the vocation pursued, the habits formed, the intelligence of the individual, and his state of health. Owing to the fact that the degenerative diseases "crawl on" so insiduously and to the fact that the vast majority of mankind are found to be possessed with defects of which they are unaware, it is a wise procedure for him who

desires to live a long, active and useful life, to insist upon an annual overhauling.

Our relationships to the competent and painstaking physician should be similar to our relationship with our dentists. The efficient dentist to whom we ascribe the guardianship of our teeth, let us say from infancy on up, would feel that he had been remiss in his obligations and in his practice providing he is compelled to substitute plates for teeth in the average person. Perhaps in the near future we shall censure our physician, to whom we have given over the wardships of our health, for the occurrence and progress of retrogressive processes which the physician could have prevented.

TOO MANY DIPHTHERIA PATIENTS DIE

Why should there be any diphtheria mortality at all? Antitoxin is to this disease what water is to fire. The answer to the question is, therefore, that the antitoxin is not given soon enough or in sufficient quantity. Fire does not spread more surely or more rapidly among combustible materials than diphtheria in the tissues of the child attacked. The one supreme necessity is to head it off—put it out. A dose of 5000 units of antitoxin may or may not suffice. This dose should be the minimum and it is far better to give 10,000 or 20,000 units in one dose than in two.

Nature is helpless in many of these cases; her defensive forces are simply overwhelmed by the poison of the disease. Give the patient a full dose, a liberal dose, of antitoxin, and as many as may be required; arrest the poisoning process; and then nature, relieved, rallies her phagocytic forces and destroys the invading bacilli.

The mortality of diphtheria in this country, according to the Parke, Davis & Co., advertisement elsewhere in this issue, is 10 per cent. One patient out of ten dies. Save the tenth child!

AMERICAN SYNTHETICS

The Fordney-McCumber Tariff Bill, recently passed by congress, unfortunately does not provide sufficient protection for American-made medicinal chemicals, nor does it compensate for the extensive research work which has been done by American chemists.

The rates on medicinal chemicals were passed over the protest of the medical profession. It is now possible for the physicians to follow up their protest by using only American-made synthetics, and referring to them, at all times, by their American names, as suggested by the Council on Pharmacy and Chemistry of the American Medical Association.

Among the important American-made medicinal chemicals which should receive the support of all American physicians, are Arsphenamine, Barbitol, Cinchophen and Procaine. Literature on these products may be obtained by writing to The Abbott Laboratories, Chicago.

The Journal

OF THE

Michigan State Medical Society

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NOVEMBER, 1922

Editorials

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Bldg., Detroit, Mich.

IMPORTANT

Despite the fact that Medical Defense has been a part of the work of the Michigan State Medical Society for a dozen years and the proper procedure for the doctor threatened published many times in the State Journal, there remain many men who do not know what to do when trouble comes.

Many notify the State Secretary instead of the Chairman of the Medico-Legal Committee, some notify no one until the case is about to be tried.

One such case this year almost resulted disastrously from the fact that two doctors from the same community testified against him, for a fee. The Medico-Legal Committee is frequently able to prevent this by educating the other members of the County Society as to their duty to themselves and their co-workers.

Then too, only hasty preparation is possible for our attorneys in these late calls of distress. Another thing which men do right along is to select their own attorneys whereas the selection of local attorney rests with our general attorneys, solely, the reason being that attorneys know better the qualifications and experience of other attorneys than those outside the legal profession can.

F. B. TIBBALS,
Chairman, Medico-Legal Committee.

THE ANN ARBOR CONFERENCE

In response to the call and request for a conference regarding a proposed establishment of a new nursing school in connection with the University Hospital at Ann Arbor, the following were present at the meeting held on September 20th:

President Burton; Dr. W. T. Dodge, President of the State Society; Dr. A. L. Seeley, Chairman of the Council; Councilors McLurg, Walker, DuBois, Le Fevre, Jackson, Clancy; Chairman Hume of the Legislative Committee, Chairman Frothingham of Committee on Civic and Industrial Relations; Dean Cabot and several members of the Medical Faculty, Regent W. H. Sawyer and some fifteen committee members of our standing committees.

Dr. Parnall, Director of the University Hospital, was not present. The Council did not receive any information or word as to why Dr. Parnall was absent.

The meeting was presided over by Dr. Seeley, Chairman of the Council.

The following statement was made by Dr. Dodge, President of the State Society:

Early in July Dean Cabot informed that the Board of Regents had been solicited to establish a department of the University for training nurses independent of the Medical School, governed by a dean and equipped with a faculty of its own. He also gave me an opportunity to examine a report of a committee on Nursing Education appointed by the Rockefeller Foundation and which I shall hereafter call the Winslow Committee after its chairman. He also permitted me to read a communication from Dr. Parnall, Superintendent of the University Hospital, to the president of the University, advocating the establishment of such a department, and his own reply thereto, in opposition.

Dean Cabot stated to me that he considered this project, if adopted, would prove very damaging to the Medical School and he requested me to take steps to bring the matter to the attention of the medical profession and obtain their views thereon, also to use any influence I might have to prevent final action on the proposition by the Board of Regents until an expression of opinion from the profession could be obtained. I, accordingly, wrote to Regent Sawyer requesting delay and requested the Secretary-Editor to direct inquiries to Dr. Parnall. I have also taken up the matter with the chairman of our Committee on Civic and Industrial Relations and the chairman of the Committee on Legislation and Public Policy. At their suggestion I have arranged for this special meeting of the Council and this Conference. In addition I have presented the proposition to every meeting of medical men I have had the pleasure of attending and have approved the publications that have been made in the Journal on this subject.

I am of the opinion that the proper policy would have been to publish the argument made by Dr. Parnall in favor of establishing this new department and Dean Cabot's reply thereto. Permission for such publication could not be obtained and Dr. Parnall declined to answer the questions put to him by the Secretary-Editor. His comment was that it would be obviously improper for him to issue unauthorized statements upon official matters pending

before the Board of Regents. He had been asked to give, for publication, his own opinions only.

I wrote to President Burton asking him to permit the publication of these communications, but as shown by the letter to me from the Secretary of the University, published in the August Journal, it was very rightly decided not to trouble the President with the matter during his vacation. The Secretary, however, comments as follows: "It is my judgment that it would be highly unfortunate for Dean Cabot or Dr. Parnall to publish their views on a matter which is at present before the Board of Regents." I do not agree with this statement. In my opinion the proper time to discuss a proposition of this sort, if it cannot be done earlier, is when it is before the Board of Regents. Better it would have been to have first submitted the proposition to the faculty of the Medical School and obtained their views before its presentation to the Board of Regents. Obviously the views of Dean Cabot and Dr. Parnall are far apart. Dr. Parnall says: "That the medical profession will be injured in so doing is unthinkable." Dean Cabot says: "To introduce into this rather delicately balanced machinery another faculty—which would very properly stand upon its rights—and upon its dignity—might very easily deal a blow at the very root of medical education in this state."

In discussing this proposition at meetings of medical men I have presented to them the substance of the Winslow report and its recommendations, and the criticism I have to make on that report is partly based upon the criticism uttered by others and partly based upon my own experience in the training of nurses. The report considers the subject of nursing training purely from a pedagogical standpoint and ignores the economical considerations relating to hospitals that have made the existence of the present hospital training schools possible. It also emphasizes the necessity, in the view of the committee, of liberal financial support for all forms of nursing education. This is the only profession I believe, in which students are admitted to training without the payment of tuition charges and where room and board are furnished free of charge, and where the student is, during a portion of the course, oftentimes paid a considerable stipend for the services she renders. To reimburse the hospital for these expenditures furthering her education the student nurse is expected to assist in conducting the affairs of the hospital, to assist in keeping it clean and to assist in caring for the patients. In this way, performing these duties under close supervision, she receives, in my opinion the more important portion of her instruction. In performing these duties she is frequently called upon to perform menial tasks which in the opinion of the Winslow Committee is derogatory to the dignity of the trainee. I have known medical students to perform menial tasks in order to make a living while pursuing their medical studies. I have never known that their dignity suffered or the good opinion of their associates was lessened thereby. In my opinion the principles of cleanliness and the "aseptic conscience" can be more thoroughly built up and established in the mind of a trainee, by practical work, under proper supervision, than by didactical instruction in the class room. The Winslow Committee proposes to lessen the period devoted to a nurse's education by the following methods:

"It is fundamental to the success of nursing education that adequate funds should be available for the educational expenses of the school itself, and for the replacement of student nurses by graduate nurses and hospital help in the execution of routine duties of a non-educational character. With the necessary financial support, and under a separate board or training school committee, organized pri-

marily for educational purposes, it is possible, with completion of a high school course or its equivalent as a prerequisite, to reduce the fundamental period of hospital training to 28 months and at the same time, by eliminating unessential, non-educational routine, to organize the course along intensive and co-ordinated lines with such modifications as may be necessary for practical application; courses of this standard would be reasonably certain to attract students of high quality in increasing numbers."

It will thus be seen that the committee would upset all the present economic factors connected with the training of nurses. The teaching faculty of a training school shall be independent of the clinical staff. The hospital shall be conducted by paid employes, students shall have the use of the wards for instruction purposes, patients shall be utilized as material, but the student nurse shall not be humiliated by the requirement to perform any menial tasks. Money is required to establish such a school but it is not intimated that the students shall be called upon to furnish it by the payment of tuition and board. Such training school as is described by the committee is utterly impractical and if adopted anywhere will result in producing a crop of stilted over-educated women who will be absolutely useless as nurses to care for the sick. Would it not be better to shorten the course of instruction by cutting down the mass of medical theoretical teaching that is now indulged in for the sole purpose of fitting the student nurse to pass the state board examination? It is absurd to expect a nurse to be qualified to answer some of the technical medical questions now asked on examinations. A knowledge of such subjects is only necessary to the medical man. The nurse who is taught to do as the physician directs and is taught in the fundamental principles of nursing the various classes of diseases, and who is inculcated with the "aseptic conscience," and who has performed the routine duties of the ward and operating room, under proper supervision, so many times that she can be safely trusted to do it without direct supervision, is better qualified to perform the duties of a private duty nurse than the one who is only given technical teaching in the lecture room will ever be.

Then it is proposed that a group of nurses shall be still more highly trained for public health work: One of the principal reasons for the shortcomings in the present training of nurses is believed to be the lack of trained leaders and well equipped instructors in schools of nursing. The committee therefore finds "That the development and strengthening of university schools of nursing of high grade for the training of leaders is of fundamental importance in the furtherance of nursing education." This type of school should, in the judgment of the committee, be a separate and independent part of the university, cognate in rank and organization with the school of medicine or the school of law. More than a dozen colleges and universities now provide combined courses through which students may acquire both a nurse's training and a college degree in five years, two years being devoted to the regular college course, two years to intensive training in the hospital and a fifth year to one of the higher specialties of nursing—public health, institutional supervision, or nursing education. The numerical proportion of the nursing profession to be contributed by the university school will perhaps always be a small one, yet the role of these schools in setting standards and in the training of administrators, teachers, and public health nurses is considered to be of the greatest importance."

If a young lady takes this course of training, why should she be satisfied to be called a nurse? It is generally conceded that a public health administra-

tor should have additional training to that required for the degree of Doctor of Medicine, that he should have the degree of Doctor of Public Health through a course in sanitary engineering and in public health problems. The medical schools are open to women. Why should a special school be formed to educate nurses in the manner outlined by the committee? Why duplicate teaching forces? If a young woman can devote five years to the training outlined by the committee, why does she not take the course in the medical schools?

The whole discussion of the subject by the Winslow Committee indicates to me that it has not been done by men familiar with clinical hospital work. Possibly they are fine teachers and fine executives but they are primarily interested in educational methods and not in the problems of conducting hospitals. The training of nurses has gone along very well under present methods. It is practical because in a few months a young lady can be fitted to be of real use to the hospital. She is given an easy and economical method of securing her training. She is given an independent spirit because by her labors she is enabled to reimburse her Alma Mater for the expenditures made in her behalf. She is not dependent upon charity—or endowments—and if the requirements of state boards are made reasonable and the present practice of requiring applicants to answer questions which should only be propounded to medical men is dispensed with, we need not fear but that the various hospital training schools will succeed in furnishing all the nurses that will be required.

The reply to this proposition will of course be that no one can be too highly educated to properly perform the duties of any profession and that we are advocating a reduction in standards of education. We admit the charge if the examinations to which nurses now are subjected by our state board are to be taken as a criterion of the present standard. We claim that there are certain fundamental principles that a nurse should be taught and one of the more important is that she should not herself assume any responsibility that is not specifically delegated to her by the physician in charge of the case. She should be possessed of sufficient knowledge to correctly take the temperature, pulse and respirations, and should be able to recognize the advent of unfavorable symptoms and should, at the appearance of such symptoms, be possessed of sufficient common sense to immediately notify the physician thereof, and place the responsibility on him. There should be no divided responsibility between two professions in the care of a patient. It is therefore not necessary that a nurse should be so highly trained as is the physician. If a young lady desires to perform the functions of a physician she should take the medical course. I have been informed by a nurse who has been a supervising nurse and a teacher in a hospital training school, but who has now the way of most good nurses and assumed charge of a home of her own, that in her opinion, nurses, better fitted for private duty nursing were turned out under the old two year training system: That it was her observation that the present high school trained, too aristocratic to permit themselves to perform the menial tasks that are often necessary if a patient is properly cared for. While a member of the State Board of Registration in Medicine I occasionally borrowed questions from those submitted to our nurses by their State Board and found that a considerable percentage of our nursing graduates are specially primed to answer many of these questions by a system of "craming." We claim that the present requirements of our State Nurses Board, the questions asked on examination, do not tend to improve the quality or efficiency of the nurses who are

now being trained to meet such conditions and that whatever efficiency in caring for patients is exhibited by these nurses is due to their daily work in the wards of their hospitals and not to the useless cramming they receive on purely medical subjects.

To enter into a further discussion of the problem of providing adequate nursing care for the people would lead us far into a question of economies. The profession will undoubtedly, record its opinions and recommendations when the Committee of the American Medical Association brings in its report. Until now we have only the views of self-constituted groups, not without personal interest, and who have secured Foundation funds to pursue their fanciful investigations. The medical profession is deeply interested. It cannot be denied that they rightfully are entitled to record their desires. Their recommendations should be carefully considered before any radical changes are instituted in our state hospitals and especially our University Hospital. To surreptitiously attempt to create a new department in our University Hospital, especially when such a department tends to alter the relationship of physician and patient, to change the service of nursing care to the patients of the University Hospital and to limit the activities of the staff of that hospital as well as the Medical Department of our University, cannot be viewed as other than inimical to the good of the public, the interests of the medical faculty and the relation of physicians to their clientele.

It is our opinion that the activities of the promoters of this movement might better have concerned themselves with providing for a class of nurses that would relieve the present situation. No need presses for a super-trained nurse, who at best, barely supplants the cult members amongst us.

In discussing this subject with the physicians of the state, the sentiment that exists I present to you, Mr. Regent and Mr. President, in the following summarization:

1. That we oppose and respectfully request that no further effort be made to institute such a training school in our University.
2. That any plan suggested that alters or modifies the methods used in the University Hospital in its executive or administrative methods, or that affects the University Hospital Training School for Nurses, shall before presentation to the Board of Regents be submitted for consideration and expression of opinion to the faculty of the medical school.
3. That the University Hospital be placed under the supervision and direction of the Dean and Executive Committee of the Medical School. That the Director be obligated to report to the Dean.
4. That the University join with the State Medical Society in an effort to influence the Board of Registration of Nurses to so modify its examinations as to eliminate technical questions that should properly be propounded only to graduates in medicine.

A profession we are concerned with the professional and educational interests of the Medical School and Hospital of our University. We are eager to aid in the enhancement of its standing in the educational world. We are emphatically opposed to its being a party to carrying out the idle machinations of self imbued reformists pursuing the quest of the idealists with a sacrificing of the practical.

The viewpoint and position of the Medical Department of the University was set forth by Professor Warfield, upon Dean Cabot's request, as follows:

The question before us today, as I understand it, is this: Should there be established at the University Hospital a school of nursing education with a

separate faculty composed of professors, assistant professors, associates, instructors, as recommended in the report of the Committee on Nursing Education financed by the Rockefeller Foundation?

It is well known to all here that I have just come from another state and have been connected with a large hospital for some years. The opinions which I shall express in the course of this brief paper are opinions held by me for some time, as a result of observation and study of the general nursing situation, both in private practice, in the hospital, and in the field of Public Health Nursing. They are, therefore, the opinions of an outsider who has come to your state, but who has not yet had an opportunity to inform himself in detail concerning the local situation and, therefore, cannot be influenced in his opinions by any local matters. The question is a broad one and should be considered and settled on a broad basis.

First, I wish to say that this report deserves careful consideration because of the personnel of the committee. The fact that scarcely any male member of the committee is or has been engaged in the practice of medicine in the field, but is a scientist or pedagogue, rather detracts from the combined opinion as to what is best for the medical profession and the public at large.

As the years have passed, the nurses themselves, led by high minded idealists of their profession have been adding and adding to the curriculum until now the didactic side of the training over-reaches the practical side, and young women of high school education are trying to digest courses in anatomy, physiology, bacteriology, chemistry, clinical medicine, which are much more suited to the training of doctors than to the training of nurses. The consequence is, that a mass of misinformation or pseudo-information sticks in the mind of the average pupil nurse which is of no value to her, but on the contrary is of positive harm. She loses the spirit of service and of assistance to the doctor, and often has attempted to tell the doctor what to do. In other words, the present curriculum for nurses tends to make of them neither good nurses nor good doctors. It is the inevitable result of trying to make out of a handmaiden to medicine an equal to medicine; to make a part equal to the whole.

No one will deny that the nurses are more competent today along certain lines than they were 20 years ago, but one has to admit that the average nurse seems to have lost something in the effort to gain a greater and greater medical education.

In reading over the report of the committee, one is struck by the obvious lack of emphasis placed upon service to the patient. It is entirely concerned with educating the nurse. Now, the primary object of any training school for nurses is to train young women to care for the sick. Caring for the sick is not a science. It never will be. It is an art, and all who have come in contact with women who have helped the physician in caring for sick people know that the art is born in the woman and cannot be educated into her. Some of the best nurses we, as practising physicians, have seen have been women who never had a day's training in a hospital. This situation, it seems to me, must be taken into consideration in any discussion of higher education for nurses.

It is not altogether clear in my mind just what is proposed for our hospital. That is, whether we are asked to make two schools of nursing: one that we already have, and another, more highly educational one, to train specialists, with a moderate faculty; or whether it is proposed to take over the whole School of Nursing in the hospital and convert it into a school for the development of teachers of nursing. This, on its face, is absurd. Only a small percentage

of nurses who take training are fitted temperamentally to be teachers and executives. Those who wish to take up such advanced work can always do so, either in the hospital where they have completed their course, or in some other hospital or special institution. No one expects to make scientists, teachers, and research workers out of every medical student, even in the most advanced medical schools. Why should it be thought that it is possible to do this with nurses? There is need for executives and teachers of nursing. No one will deny this, but one hesitates to admit that the best method is the one proposed by the committee.

Now, the report takes cognizance of the fact that the problem is complicated. It is both educational and economic and, in order to meet the economic situation, it suggests private endowment of \$1,000,000—to several schools in different parts of the country. Endowment from the huge Foundations has undoubtedly done much to advance research in medicine and to meet the needs of the public for medical practitioners, but all private endowment, tends to develop autocratic powers of control where the money is given. Rarely has a wealthy Foundation managed, naturally, by a board of human trustees, given funds outright to an institution over which it has no control of policy. This appears particularly to be the case in sums donated by one of the huge and enormously wealthy Foundations. Occasionally, indeed, it would appear that the funds had been donated in order to gain a foothold for the eventual domination of the policies of the institution accepting the funds in good faith. Any proposal to establish the sort of nursing education which the report seems to advocate and which it is understood (but from no definite information) is contemplated for the University Hospital, must take into account the factor of expense. Are we not running now dangerously near the limit of expense in the care of patients? Medical education is the most expensive kind of education and nursing education cannot, it seems to me, be divorced from medical education without adding greatly to the expense and without tending, at the same time, to separate the assistant of medicine from medicine. As I see the scheme, the pupil nurses under their separate faculty (an added expense) will be loaned to the hospital for certain hours, say eight hours a day. They will be subject to a curriculum even more advanced than the present too-advanced one. In the hospital they will help to take care of the patients, but the actual nursing will have to be done by a paid staff of graduate nurses, because the pupil nurses, in such a proposed scheme, will be somewhat like medical students: attending clinics, rather than assistants to the staff in the carrying out or remedial measures of all kinds ordered by the staff. A moment's thought will reveal how tremendous the expense will be. It is doubtful, in a hospital as large as our new hospital will be, if the interest of \$1,000,000 will take care of the added expense.

I cannot see how the patients who come here for care and treatment can benefit by another group working over them when they already are being disturbed, sometimes it would seem too much, by their use as teaching material for medical students.

As I said before, and it is well to emphasize this point, the primary function of a nurses' training school is to train women to take care of the sick. The hospital organization demands that there be heads and assistants. The nurse is not a separate entity in the hospital, but is an integral part of the therapy, the treatment of the sick. She carries out the doctors' instructions as to diet, drugs, and general care, and the doctors have delegated to her instructors the duties of showing the pupils how to perform the necessary offices in the care of ill and

disabled human beings. To view nursing education as something apart from service to the sick patient is to put it on a par with education in history or mathematics and to take away from it the very essence of what nursing is, viz: personal service from one to another in times of trouble and illness. To place nursing education on a business basis would defeat the very object of nursing. It seems to me that the plan would tend to draw away from the intimate association with the medical faculty and become a purely intellectual pursuit. The very name: "Faculty of Nursing Education" connotes a departure and separation from the primary object of nursing: service to the patient.

I realize that there should be opportunities for young women to take advanced work which would fit them for positions as teachers and executives. The number of young women fitted by nature for these positions will be but a small percentage in any school of nursing, and executive positions beginning with supervisors of wards are already available in the hospital. For the few who are qualified to take advanced work it would seem to be poor policy to establish what would amount to a school of advanced standing. It would be a tremendously costly experiment.

The point has been raised that a school such as is proposed in the report would attract a greater number of desirable young women. From a rather large experience with hospitals to which training schools are attached, I should say that there are several reasons why young women choose a certain school. It is certainly not primarily on account of the quality of instruction given, or on the standing of the hospital in the community.

This hospital is a university hospital in the strictest sense; a unique institution, officered by the Medical Faculty of the University, a teaching hospital. These are all the qualities which should attract the very best class of young women now. I am told they are not attracted and for one very special reason, viz: the lack of proper living quarters where they will have the physical comforts so essential to their happiness. This, I am convinced, is the chief reason why we do not get more pupil nurses.

To say that young women are not attracted to our hospital because of lack of university standards is to betray a lack of appreciation of the character of the university hospital. Another point which touches us very intimately is that the university hospital is a hospital for our state patients. It is run by the state for the benefit of the people in the state. The public is interested now in obtaining attendants upon their sick who will take charge of the home and be in reality a very real help in times of illness. The graduates from such a proposed school, because of their higher intellectuality, would be even more averse to performing many of the little duties in the sick household than many of the present graduates are. This is a very vital point, as can be attested by physicians out in the field. Does the University Hospital wish to train nurses to care for the great mass of sick, or does it wish to attempt an experiment in training teachers, executives and nurses who will be too highly trained to care for the 90 per cent of illnesses? This is, it seems to me, a most important point to consider.

I do not believe, therefore, that it would be wise to establish a separate Faculty of Nursing Education at the University Hospital. Certainly, before any such radical step is taken, the whole situation should be very carefully considered by a committee of the Medical Faculty who are intimately associated with the problems in the hospital, and who are vitally concerned with the kind of nursing service rendered to the patients.

In order to lay before you some points for discussion, I present my own opinions in regard to some of the disputed points in the broad problems of nursing education.

From the constructive standpoint, therefore, I believe:

(1) The course for trained nurses should be shortened to two years, plus a four months' probation service, during which four months they would receive a large part of their class work in the subjects of anatomy, chemistry, bacteriology, hygiene, pathology, food chemistry, dietetics, materia medica, etc.

(2) The nursing faculty should be composed of teachers of didactic subjects and of practical demonstrators.

(3) The school of nursing should be under the Medical Faculty as a department for the study and care of patients.

(4) The present curriculum should be ruthlessly slashed, so that there are more dietetics, more actual practical demonstration, less anatomy, chemistry, bacteriology, pathology, medical student clinical medicine, etc.

(5) There should be provision in certain schools for post-graduate training.

(6) There should be short courses of training for intelligent women who wish to make a life's work out of attending the sick.

(7) The superintendent of the hospital, being the executive head of the hospital, having to do with all the varied conditions of hospital business, should have only an advisory voice on some committee in the conduct of the training school for nurses.

(8) The policy of the training school for nurses should be guided by a board composed of members of the Medical Faculty, one of whom should be the Dean, the Superintendent of the Hospital, the Superintendent of the Training School, and others to be chosen by them.

(9) The Superintendent of Nurses should be selected by a committee upon which are members of the medical hospital faculty. She may be given an Assistant Professorship of Nursing on the Medical Faculty.

It is thus apparent that I am opposed to the establishment in the Hospital of a Faculty of Nursing Education. I am convinced that certain changes should be made in the curriculum as at present laid down and certain other changes in the general plan should be made. I believe that before any changes are made, there should be full and free discussion among those vitally interested in caring for the sick people of the state.

LOUIS M. WARFIELD.

A general discussion was then engaged in by President Burton, Regent Sawyer, Drs. Jackson, DuBois, Taylor, Frothingham, Hume, Warfield, Dean Cabot, Hueber.

President Dodge offered the following resolution, which was unanimously adopted:

Moved that the following brief statement of our opinion be transmitted to the Board of Regents through President Burton:

It is the well considered opinion of this meeting that the creation at the University of Michigan of a School of Nursing under a faculty separate from the Medical Faculty and from the administration of the Hospital would be very unwise. We are convinced that nursing is most intimately connected with the practice of medicine and that any step which tends to separate it from the practice of medicine will be harmful to the interests of the community. It can-

not be doubted that the responsibility for the selection and for the work of nurses lies and must lie with physicians, who must therefore be importantly concerned with their education. The separation of the training school from the hospital and the medical staff would make such responsibility impossible and would result in chaos.

We are further of the opinion that the present very unusual arrangement at the University Hospital by which the training school for nurses is wholly under the control of the administrative officer of the hospital is unsound in theory and dangerous in practice. We believe that the training school for nurses should be directed either by the Medical Faculty or by a committee appointed by it.

President Burton made the statement that the next step would undoubtedly be the referring of the plan to the Medical Faculty, by the Board of Regents. He also stated that the creating of a new department by the Regents was not a matter easily accomplished.

The Conference adjourned.

Comment: At a meeting of the Regents held September 22 the proposed plan was tabled. There the matter rests officially. The proponents of the plan have evidently not tabled their activities. They are endeavoring to enlist supporters and create a sentiment favoring this new school by continued activity. They are utilizing nurses throughout the state to wage a campaign and are interviewing individuals and requesting them to exert their influence with the Regents. They are also enlisting the support of women's clubs and certain clubs have already sent telegrams to the Regents.

It was the voted instruction of the Conference that no publicity should be given to the discussion that occurred during the meeting.

It was regretted that Dr. Parnall, the recognized proposer of this plan, was not present. We cannot feel that his absence was anything but an expression of a desire to act independently and to ignore the profession. Ample notice was given of the conference. Unexpected emergencies might have been explained by messenger or written communication. As it was, the conference was simply ignored by Dr. Parnall. Does he feel that he does not need to recognize or confer with the profession in this matter? We wonder whether he can wisely and to the best interests of the University Hospital ignore the profession of Michigan.

The plan is vicious in many ways. It is detrimental to the welfare of the Medical Department of the University. It is detrimental to the welfare of the public. It is detrimental to the welfare of the profession. It is urged that the following activity be engaged in:

1. The adoption of a resolution expressing disapproval of the plan and petitioning the Regents to not establish such a training school.
2. Adopting a resolution urging the Regents

to place the University Hospital under the control and direction of the Medical Faculty.

3. That these resolutions be sent to the president and secretary of the university and also to each Regent.

4. That individually you write to the Regents of your acquaintance. The following comprise the Board of Regents:

Junius E. Beal, Ann Arbor.

Frank B. Leland, 133 Griswold Building, Detroit.

William L. Clements, Bay City.

James O. Murfin, Dime Bank Building, Detroit.

Benjamin S. Hanchett, Grand Rapids.

Lucius L. Hubbard, Houghton.

W. H. Sawyer, Hillsdale.

Victor M. Gore, Benton Harbor.

There is need for activity on the part of every County Society and our members individually. There should be no delay. It is urged that you take action at the very earliest opportunity. County Secretaries are requested to read this editorial statement at the first meeting following the receipt of this issue of the Journal.

ABDOMINAL PAIN ACCOMPANYING ACUTE THROAT INFECTION OF CHILDREN

At this time of the year, when throat infections are common among children, we call attention to throat infections complicated by abdominal pain. Attention had previously been called to the relation between generalized infections, glandular infections and abdominal pain by Hutchison and others but this condition had not been previously related to throat infections.

The presence of this condition is dependent upon the coincident occurrence of a throat infection with abdominal pain. The pain described as appearing suddenly and is always centered about the umbilicus. The child, when asked to point to the place of greatest pain, places his finger upon his umbilicus. On further examination he is found to have a definite throat infection of some sort. The pain in the abdomen is quite sharp and not uncommonly its persistent presence has resulted in operation with a tentative diagnosis of acute appendicitis. It is in these cases that the pathological and clinical evidence was found to support this view. These cases were found to show only an acute lymphadenitis of the retro-peritoneal and mesenteric lymph glands with no involvement of the appendix.

With the subsidence of the throat infection and the drop in temperature the pain subsides and the child makes an uneventful recovery.

This condition is of considerable interest because the desirability of differentiating it from acute abdominal conditions, particularly acute appendicitis. However, in all typical cases no rigidity, tenderness or other evidence of peritonitis is to be found, although symptomatically the condition resembles the onset of acute appendicitis. While no experimental evidence has been produced to justify this syndrome, the pathological clinical evidence is quite strong and the conclusion seems quite justifiable.

However, as the author says, "One should not dwell in a fool's paradise." Sore throats and acute abdominal conditions necessitating operation may occur simultaneously and such conditions are recorded. Yet the conservatism of the practitioner who prevents an unnecessary operation upon a child with abdominal pain resulting from a sore throat is commendable. As in other things a happy medium commensurate with good diagnostic acumen is desirable.

H. T. C.

J. Brennemann—*American Jour. of Dis. Children*, Nov. 1921-22, No. 5.

ROOSEVELT HOSPITAL EXAMINATION

Dr. W. T. Dodge, October 13, 1922
Pres. Mich. State Medical Society,
Big Rapids, Mich.
My Dear Doctor:

The committee appointed by you in accordance with a resolution passed by the State Medical Society, at the Flint meeting, for the purpose of investigating conditions at the Roosevelt hospital, composed of the following members of the State Society, Dr. H. A. Haynes, Lapeer; Dr. Geo. H. Lynch, Big Rapids; Dr. J. D. McCoy, Cass City; Dr. E. N. Nesbitt, Grand Rapids and Dr. W. S. Shipp, Battle Creek, submit the following report:

Your entire committee visited the Roosevelt Hospital on the morning of Oct. 12, 1922, entirely unannounced to the Hospital management. The hospital was found to have a capacity of 124 patients, with 118 now under treatment. Of these 25 are bed patients, the remainder being ambulatory. Additions are now well under way to increase the hospital capacity to 400. There is said to be a waiting list of about 200 at the present time who desire admittance.

The Hospital is pleasantly situated, on high ground, just at the easterly entrance to Camp Custer. The main building is large with abundant air space, and found to be clean, well ventilated, well lighted, well heated and well furnished. Here we found in one wing the large dining room with tables for four (trays are carried to bed cases). Another wing had billiard and pool tables, with other amusements,

and in another we found a number of patients receiving vocational training under the charge of four instructors. Comfortable chairs were to be found all about.

From the main building we visited the sleeping quarters. The rooms are off corridors leading from the main building. All are of good size and well lighted and ventilated, and appeared neat and clean, with sufficient lavatory and toilet equipment. A notable feature everywhere was the fire protection. The entire place being equipped with sprinkler system, besides pressure hose.

The general laboratory, dental and X-ray departments are all well situated and equipped, and in charge of competent heads.

The kitchen is in charge of a trained dietitian and is large and also well supplied with help and equipment, and gave an excellent appearance. A meal was in preparation during our visit and it looked wholesome and good.

Your committee found the hospital management, both business and medical, very courteous and business like. We made personal inquiries of about 25 patients, asking them as to their care, food and general treatment, and we found not one who did not speak well of the institution. All said that they were well-fed and well looked after.

The conclusion of your committee, after going thoroughly through and about the Roosevelt hospital, is that it is well and efficiently managed and run, and that the patients there are treated in a manner entirely satisfactory, as evidenced by their word and the smile on their face.

Most respectfully,
(Signed) W. S. SHIPP, Chairman.

"A LETTER TO OUR MEMBERS"

To the Officers and Members of All County Medical Societies.

Gentlemen:

The November number of our Journal contains a statement of the action taken by your representatives at the Conference recently held in Ann Arbor to consider the latest proposition made concerning the training of nurses. It has since come to my knowledge that a campaign of propaganda has been started, through nurses associations, to submit their expressed opinion of your representatives and bring public opinion to bear upon the Board of Regents whereby the establishment of a separate department of our University may be brought about.

This campaign is started by a deliberate misrepresentation that we are opposed to giving the nurses opportunity to further pursue their education after graduating as nurses. This statement is absolutely untrue. Your representa-

tives believe that nurses who aspire to become executives filling public health positions should be fully educated therefor by taking the degree of Doctor of Medicine and then further pursuing their studies until they have acquired the degree of Doctor of Public Health. The President of the University assured us that ample facilities were already afforded by the University to pursue their studies.

Your representatives were opposed to permitting the divorcement of the nursing from the medical profession by the creation of a separate department of nursing training at the University. We believe that the nursing profession and the medical profession should continue as in the past in the closest harmony. That in no other way can either profession accomplish best results. Your representatives were especially concerned with the best course to follow in the training of private duty nurses. We are opposed to the proposal of the Winslow committee that a course of instruction of nine months for training a practical nurse be provided. We are in accord with the proposition that the regular course of instruction be made 28 months. We disagree with the recommendation of that committee concerning the method of instruction to be given. We favor four months of probation during which time the student nurse shall be given class room instruction only and shall not be called upon to do any work in the hospital, to be followed by two years of hospital instruction, in which the student shall do the nursing work of the institution under adequate supervision and bedside instruction. In this way the nurse will maintain her independence and be permitted as at present to pay her services for her instruction and her support. We think this places the nurse in a more favorable position than she would be if dependent upon charity or endowments for her support.

The Winslow report recommends that all the work of the hospital shall be done by hired employees and that the entire time of the students shall be devoted to receiving instruction. Your representatives do not believe that competent nurses can be trained by such a method.

If you believe that your representatives properly expressed your position, please take steps to emphasize that fact by adopting resolutions and sending them to *each member* of the Board of Regents and the President of the University.

1. That the establishment of a separate department in the University Hospital for nurses training is disapproved.

2. That the conduct of the University Hospital and the Nurses Training School shall be again in charge of the faculty of the Medical

School, where it has always been until changed by the exigencies of the late war.

This last is very important. If it is not done, your representatives believe that serious harm will result to the Medical School.

We urge that you cause prompt action by your County Society.

W. T. DODGE, President.

The Regents of the University of Michigan:

Hon. Junius E. Beal, Ann Arbor.

Hon. Frank B. Leland, 1133 Griswold, Detroit.

Hon. William L. Clements, Bay City.

Hon. James O. Murfin, Dime Bank Building, Detroit.

Hon. Benjamin S. Hanchett, Grand Rapids.

Hon. Lucius L. Hubbard, Houghton.

Hon. Walter H. Sawyer, Hillsdale.

Hon. Victor M. Gore, Benton Harbor.

GOITER

The Subject of Exophthalmic Goiter has so long and so often been through the mill that one hesitates to discuss it further for fear of being a bore. However it is possible that a somewhat new and refreshing conception of it may be of some interest. Hyman,⁽¹⁻²⁾ Lieb and Kessel have painstakingly analyzed our current conceptions and by combining good philosophy and analytic criticism brought to light the fallaciousness of our views, at the same time that they presented their new and novel ideas. They have demonstrated the insignificant etiologic relationship the thyroid bears to the cardinal symptoms of hyperthyroidism and exophthalmic goiter and the fact that thyroid enlargement and hyperphasia are hangers-on rather than essential pathologic symptoms. They have been unable to find any one who has recorded the successful production of all the classical signs of goiter by the injection or use of thyroid products. Instead they have shown a remarkable correlation existing between the symptoms of this disease and that due to the disturbances of the autonomic system, symptoms popularized not so long ago by Eppinger⁽³⁾ and Hess as vagatonia and sympatheticonia. So close is the relationship and so easy of production in the laboratory that one can hardly hesitate to accept their views. They conceive a normal person as having either a stable autonomic system or as having a potentially imbalanced autonomic system, the latter being in a state comparable to that of a compensated heart in valvular disease. But like in heart disease the lessened reserve may be demonstrated by the injection of epinephrin, the Goetsch test. These latter so-called normal individuals when subjected to the environmental mental and physical hazards of

life break down their compensation so that they present the signs of an active imbalance of their autonomic system with the symptomatology ordinarily ascribed to hyperthyroidism or goiter namely tachycardia, tremor, nervousness, goiter and positive Goetsch. But they do not present an increased metabolic rate. To these symptoms they have applied the name sympathomimetic manifestations. A person presenting these symptoms may break down further still until they present in addition an elevated metabolic rate with the development of true exophthalmic goiter.

Acting on this premise these workers have been able to treat exophthalmic goiter patients along new and simplified lines and it will be interesting to watch the further history of thyroid disturbances which seems doomed to revolutionary conceptions.

M. L.

1. Lieb, Hyman and Kessel, J. A. M. A., Vol. 79, pp. 1099.
2. Kessel, Lieb and Hyman, J. A. M. A., Vol 79, pp. 1213.
3. Eppinger and Hess, Vagatonia.

CANCER WEEK

It was the universal opinion that "Cancer Week, 1921" did more for the enlightenment of the public in regard to cancer than anything ever attempted previously. The newspaper publicity, the clinics that were held, the educational literature distributed and the public meetings and lectures imparted to the public authoritative information. The people learned the nature, course, symptoms, and methods of prevention and cure of the disease. It lifted the curtain and imparted information that the public needed. Thousands profited by reason of these activities during Cancer Week. It was a wonderful work.

Inspired by the success of the movement, Cancer Week for 1922 has been designated as November 12-20. The work of 1921 is to be enlarged upon and farther reaching steps are being taken to make it more successful than last year. The movement has been endorsed by President Dodge and the Council of our State Medical Society. Dr. Reuben Petersen is again state chairman.

It is urged that every county society cooperate in every possible way. Foster the movement so as to make it a success in your county. See that a public meeting is held and have your society sponsor that meeting. Interest the editors of your local papers. Induce your church pastors to support your activities and address their congregations upon the subject. Cause your friends to attend these meetings. This year's Cancer Week must exceed

in achievements that which was accomplished last year. The success depends in direct amount upon the effort you put into it. Why not one hundred per cent? It depends upon you.

Editorial Comments

Anonymous communications receive no attention. In this instance if you have a grievance against a fellow or group of fellows go to them personally, or, appear with your charges before the officers of your County Society. Your editor does not propose to be a general prosecutor, nor is he seeking to continually keep washing the dirty linen of any locality.

The "Chiros" are again asking for a State Board. Have you talked to your representatives in Lansing? Do it now and give them your side before these "Chiros" pump them full with propaganda.

The following extract from the address of the President of the Ohio State Medical Society is germane to the profession of Michigan:

"An active, harmonious and zealous profession, with interest in the work for the betterment of the physician and the conditions under which he must work, is one of the greatest needs of the profession today. The whole profession is not at its task. If 15 per cent of the profession with the greatest foresight and vision should suddenly discontinue their activities on behalf of their professional brethren the profession itself would be left flat on its back. The larger percentage of physicians look to the few for enlightenment and guidance, and when that does not shine to the greatest degree of brilliancy or there is an obstruction in their path which is not successfully overcome, the cry of criticism is heaped upon those who have been most active and loyal. More physicians must devote more thought and effort to organization. The rank and file must realize how impotent are the officers and committees without the active support of the entire membership.

"We need medical organization as never before, through which medical thought and medical leadership can be expressed. We need organization not to complain, object and resist, but to explain, direct and construct. We need it for mutual help and protection of the profession. We need it for the protection and welfare of the people. Always realizing that the state medical association depends on strong, active, loyal county societies and local academies of medicine, our efforts constantly should be exerted toward increasing the effectiveness of the central organization, which is the point of contact not only with governmental functions, but also with other statewide and with national organizations and groups interested in allied issues. The mechanics of organization must be steadily added to and enlarged. Every eligible physician should be induced to become a member of his county and state association. I foresee in the not distant future a substantial in-

crease in membership dues. Ten dollars a year per member for the state association should not be considered too large. It would be ridiculously small in comparison to membership dues in many other kinds of organizations."

Will you participate in bringing about a greater degree of activity in your county?

The profession was distinctly honored in the election of Dr. Harkness of Houghton as State Commander of the American Legion. Though there has been much discussion of the bonus question, that propaganda is not the principal motive of the Legion. It is accomplishing splendid results along other lines that commend themselves because of their high motives. We look forward to a year of greater achievements under the direction of the new commander. We congratulate Dr. Harkness upon this deserved honor.

The Annual Red Cross Roll Call is to be held this month. We know what the Red Cross did during the war. We know what it does where a calamity overtakes a community. For that type of work we have nothing but the greatest praise and commendation. We believe that to be the field and scope of activity of the Red Cross. We believe that in such work it merits our support. On the other hand, recently the Red Cross has entered a field of health nursing. In doing so, it has gone beyond its scope. In doing so it forfeits a right to financial support. Until the Red Cross withdraws from health activity our contributions should be withheld. The American Medical Association by resolution expressed disapproval of the public health activities of the Red Cross. The House of Delegates held that a continuation of such health activities by the Red Cross would promote community irresponsibility and helplessness.

Again we repeat, the Red Cross does not merit financial support until it withdraws from that field of activity.

The annual conference of secretaries of State Medical Societies will be held in Chicago at the headquarters of the American Medical Association on November 17th. The plan of the work of the Michigan Joint Committee on Public Health Education will be presented and discussed at that meeting.

At a representative gathering of active members of the profession a unanimous expression was made that a training course of two years and four months was ample for a trained nurse. That her requirements should be first, personal adaptability; second, a preliminary education equivalent to eighth grade school work, and third, that she should be taught less of the science of medicine and more of nursing principles and practice. The opinion was also advanced that the requirement and standards of the State Board of Registration in Nursing was too severe and high. In brief that the present nurse graduate if over-trained in theoretical knowledge and under-trained in practical nursing. The need exists for nurses who can contribute to the patient's

comfort rather than the nurse who can interpret the diagnostic symptoms. The massage, bath and treatments given by the present day graduate accomplishes far less than what might be accomplished by such measures. We are amused, in walking through hospital wards, while witnessing the usual back-rub that is given by the nurse—a listless, light and dainty passage over the skin with a lily-white hand that contains a few drops of the rubbing compound and presto! a "back rub" is recorded upon the chart. A waste of time and nothing done for the patient that is of any value or comforting. We hope that we are on the eve of change from the ideal and ultra-scientific to the practical and useful in the training of nurses.

You owe it to your patients and community to extend to them the message of hope during Cancer Week. More people, after the age of forty, die of cancer than of tuberculosis or pneumonia. This mortality rate can be reduced. The avenue of activity is education. See that the people of your community receive that education. Co-operate with your local committee and aid the officers of your county society in the work of Cancer Week.

Correspondence

The Editor of the Journal of the Michigan State Medical Society:

The Alpena County Medical Society is pleased to report 100 per cent membership. Doctors E. L. Foley and H. J. Burkholder, excepted. Dr. Foley being the o ender.

Because of very unprofessional actions, Dr. E. L. Foley was suspended from our society in April, 1920. (His signature to a death certificate and this the copy: Cause of death Septic Peritonitis. Contributory cause, Dilatation and Curretinent of Uterus. Operation by Dr. McDaniels and Dr. McDaniels was a member in good standing at the time. An autopsy was ordered by the coroner, Dr. D. A. Cameron and performed by Dr. Morse of Harper hospital, Detroit. The findings of same being, Cause of Death, Pernicious Anemia (so signed by the coroner) and no evidence of present or past pregnancy being present.)

He appealed to the M. S. M. S. and was given a hearing before its council in Bay City in June, 1920. The Council vindicated the action of our society without one dissenting vote, but, with the recommendation that he be given six months to make amends and come square and in the event he did he should be reinstated. He made no amends, rather the opposite with the result that our society expelled him in Oct. 1921, and it stands expulsion today.

The Alpena County Medical Society goes on record that this communication be given space in the Journal of the M. S. M. S. and too that a copy of the same be sent to the Journal of the A. M. A. under Michigan News.

Faternally,

JOHN S. JACKSON, Secretary.
D. A. CAMERON, President.

Deaths

Doctor Andrew Forster died August 24, 1922. He was a graduate of St. Bonaventure College and from the Jefferson Medical College.

The death of the following doctor, not a member of the society has been reported: Alfred H. Tucker.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

During the past year the library of the Wayne County Medical Society has received 1,243 bound volumes and about 300 unbound numbers of valuable journals from Dr. W. P. Manton; some 200 books from Mrs. H. W. Longyear; 400 volumes from Dr. G. B. Lowrie; 300 volumes from Mrs. A. H. Steinbrecher; and 160 volumes from Dr. Ray Connor. Over 20 physicians and nearly ten institutions have also given the library books and journals during 1921-1922. At the present time there are about 15,000 volumes in the library.

Dr. George Dock of St. Louis has presented the Wayne County Medical Society with a portrait of Dr. William Beaumont and one of Sir William Osler.

The following physicians were active in the drive for new members for the Detroit Board of Commerce: Drs. C. D. Brooks, W. R. Clinton, H. B. Garner, J. H. Greenwood, Stewart Hamilton, L. J. Hirschman, P. F. Morse, Angus McLean, F. B. Walker, Walter J. Wilson and William A. Wilson.

Drs. W. H. Browns, H. I. Gratton, Frank MacKenzie, George Reberdy and C. E. Vreeland were elected members of the Detroit Athletic Club at the September meeting of the Board.

Dr. Herman H. Sanderson read a paper on "Tuberculin Therapy in Eye Affections" before the Detroit Ophthalmological and Otolological Club Oct. 11, 1922.

The Detroit Academy of Medicine were entertained at dinner in the Detroit Athletic Club Oct. 10, 1922, by Dr. Guy L. Kiefer, the retiring president. Following the dinner, Dr. Kiefer read a paper on "Industrial Medicine." Dr. B. R. Shurly was elected President; Dr. W. H. Morley, Vice President; Dr. H. L. Simpson, Secretary-Treasurer, and Dr. F. W. Robbins, Director.

The Michigan State Board of Registration in Medicine held its fall examinations in Lansing Oct. 10, 11, 12, 1922.

Dr. Cyril K. Valade and Miss Marion I. Anderson of Detroit were married on Oct. 5th. After a honeymoon in the east they will be at home in Detroit after Nov. 1st.

Born to Dr. and Mrs. L. C. Donnelly of Detroit, a baby girl on Oct. 15th.

Butterworth Hospital, Grand Rapids, resumed its regular monthly practitioners' clinic after a summer recess. Physicians from surrounding communities are cordially invited. The day is spent in clinics,

diagnostic procedures, discussions and demonstrations.

The Michigan and Indiana Sections of the American College of Surgeons will meet in Evansville, Ind., on Dec. 4 and 5.

Dr. John R. Rogers and Dr. Harrison S. Collisi of Grand Rapids were conferred the Fellowship degree of the American College of Surgeons at Boston convocation.

We again urge that you send in news items from your locality.

Allan D. McDonald, son of Dr. Allan W. McDonald of Detroit, entered West Point Military Academy this fall.

Drs. Angus McLean, F. B. Walker and B. R. Shurly, delegates of the Detroit Chapter, attended the National Convention of the Military Order of the World War at Atlantic City Sept. 18-20, 1922.

The Bulletin of the Wayne County Medical Society announces that Dr. Walter P. Manton can be addressed by his friends at 1260 Linda Vista, R. F. D. No. 2, Box 51, Pasadena, Cal.

The Annual Convention of the Radiological Society of North America will be held in the Statler Hotel, Detroit, Dec. 4, 1922.

Dr. John M. Carter returned to Detroit recently after a three months' trip abroad.

Dr. William A. Evans of Detroit read a paper at the annual meeting of the American Roentgenological Society, held in Los Angeles this fall, on "The Value of the Roentgen Study of Mastoid Disease in Children Under Five." Dr. Evans is treasurer of this society.

Dr. Warren L. Babcock, Superintendent of Grace Hospital, Detroit, returned in September from a visit to Europe.

Dr. Walter L. Hackett left Detroit in September for London, England, to study for a year.

A celebration of the one hundredth anniversary of the birth of Louis Pasteur will take place in Philadelphia Dec. 27, 1922.

Dr. Theophilus T. Dysarz was appointed Health Officer of Hamtramck and Dr. Paul A. Klebba was elected a member of the Council of Hamtramck Sept. 19, 1922.

Dr. and Mrs. James Cleland of Detroit spent several weeks this fall in Atlantic City.

The Second Annual Cancer Week will be held in Detroit Nov. 12-18, 1922, under the auspices of the Committee on Cancer of the Wayne County Medical Society in conjunction with the American Society for the Control of Cancer and the Detroit Department of Health. It is expected that Dr. Joseph Woodgood of Baltimore will be one of the out-of-town speakers.

The new Navy Hospital, erected in San Diego, Cal., at a cost of \$1,000,000 was opened Aug. 24, 1922.

Dr. Louis M. Warfield, Professor of Medicine in the University of Michigan, read a paper on "Hodgkin's Disease and Allied Conditions" before the

Detroit Branch of the Society of American Bacteriologists at the Medical Building, Detroit, Sept. 27, 1922.

The Twelfth Annual Meeting of the American Child Hygiene Association was held in Washington, D. C., Oct. 12, 1922.

Dr. Alois Thuner of San Diego, Cal., spent part of September and October in Detroit. Dr. Thuner practiced medicine nearly 40 years in the City of the Straits. Two years ago he retired from practice and moved to California.

Drs. Robert Tapert, Walter E. Welz and A. S. DeWitt left Detroit Aug. 31, 1922, for a six weeks' trip abroad.

Sixteen members of the Wayne County Medical Society died during the past society year.

Dr. Patrick L. Ledwidge, one of the residents during the past year at Harper Hospital, Detroit, was married Aug. 31, 1922, to Miss Mary J. Hooley.

The following Michigan physicians attended the Annual Meeting of the American Academy of Ophthalmology and Oto-Laryngology, held in Minneapolis and St. Paul, Sept. 18-23, 1922: Doctors G. H. Boyce of Iron Mountain, W. B. Boyce of Escanaba, B. N. Culver of Battle Creek, C. R. Elwood of Menominee, M. A. Farnsworth of Grand Rapids, P. T. McKinney of Saginaw, P. T. Grant of Grand Rapids, George Slocum of Ann Arbor, L. W. Toles of Lansing, D. E. Welsh of Grand Rapids, Robert Bettie of Detroit, E. J. Bernstein of Detroit, Neil Bentley of Detroit, Ray Connor of Detroit, Don M. Campbell of Detroit, W. S. Gonne of Detroit, R. S. Goux of Detroit, W. R. Parker of Detroit, H. W. Peirce of Detroit and J. S. Wendel of Detroit.

The engagement of Franklin Robbins, son of Dr. and Mrs. F. W. Robbins of Detroit, to Mrs. Claytice W. Brown, was recently announced.

Dr. Stanley V. Laub of Detroit was married, Sept. 26, 1922, to Miss Dorothy F. Wilder, also of Detroit.

Mrs. Hal C. Wyman, widow of Dr. Wyman, and her daughter, Anne, left Detroit Sept. 27, 1922 for California, where they will spend the winter.

September 1, 1922, the Washington Arcade, Detroit, was closed as an office building. The physicians having offices in that building, moved for the most part into the Stroh building, the Professional building, and the David Whitney building. Doctors George Fay, J. B. Kennedy, George Kennedy, Charles Kennedy, William Kennedy, Dale King and George Parmalee moved into the Professional building; Doctors A. D. McAlpine, John McAlpine, and C. C. Wright into the David Whitney building, and Doctors A. O. Brown, G. L. Connor, Ray Connor, A. H. Goerenfle, James Hall, B. D. Harison, George Lowrie, G. H. McMahan, Carl Muenz, J. Rosenthal, Glenn Stockwell, C. H. Schulte and Wadsworth Warren into the Stroh building. Doctor M. V. Meddaugh moved his office to his home, 1309 West Warren Ave., and Doctor Robert A. Simpson to his home, 3010 McGraw Ave. Dr. J. E. Clark moved his office into the Shurly building.

After waiting patiently for years, the city of Monroe can now boast of as nicely equipped little hospital as there is in the state for its size. It was built, and is being maintained by Dr. A. W. Karch of Monroe. It is of pressed brick

construction, three stories in height and can accommodate about thirty patients. Has all the latest equipment, including X-ray, modern sterilizer and operating rooms. Since the opening, last August, it has been filled to capacity and bids fair to be a success in every detail. Dr. Karch has the best wishes of the people and medical profession of Monroe County for future success of this much needed institution.

Dr. C. J. Golinvaux has opened an office in Monroe over Hurd-Sterling Co., 5 S. Monroe St., recently vacated by Dr. Brin Miller. Dr. Golinvaux is a recent graduate of the medical school of St. Louis University, St. Louis, Mo., and just completed a year's internship in St. Vincent's Hospital, Toledo, Ohio, and Lafayette Maternity Hospital, St. Louis, Mo. Dr. Golinvaux comes to Monroe highly recommended and has the best wishes of the profession at large, for success.

Dr. Chas. T. Southworth, Monroe, has entirely recovered from his recent severe illness, and is back in his office.

Dr. Carl L. Ratigan of Detroit was married, Sept. 26, 1922, to Miss Adeline M. Page of Windsor, Ont.

Dr. Iver E. Reed of Detroit was married, Sept. 20, 1922, to Miss Catherine I. Ensley, also of Detroit. Dr. Edward Crump was best man and Dr. Owen Foster was one of the ushers.

Miss Karelyn Smith, daughter of Dr. and Mrs. Eugene Smith of Detroit, was married, Sept. 20, 1922, to Mr. Ralf A. Crookston, son of Mrs. Nellie Crookstone of Newburg, N. Y.

Dr. and Mrs. Arthur L. Gignac of Detroit announce the birth of a daughter, Rita Marion, Sept. 8, 1922.

County Society News

GENESEE COUNTY

The Genesee County Medical Society met on Sept. 20, President Miner presiding. Dr. M. A. Mortensen of the Battle Creek Sanatorium gave a most thoughtful address on "The Management of the Cardio-Renal Case." He discussed the various etiological factors concerned in the production of this most common affection. He briefly outlined the renal function tests which he had found the most useful. In treatment advised removal of foci of infection, regulation of habits, a diet with a low protein intake, restriction of fluids, and cardiac stimulants as might seem to be indicated.

The Genesee County Medical Society met at noon luncheon on Wednesday, Oct. 4, President Miner presiding. Dr. Bruce Lockwood of Detroit spoke on "Present Day Conceptions of Diet Adjustment in Diabetes." He gave a most interesting historical review of the various dietetic procedures that have been used since the disease has been recognized. He then outlined the principles of diet adjustment and clearly showed how to arrive at the proper proportion of protein, carbohydrate and fat in given cases.

The annual meeting of the Genesee County Medical Society was held on Wednesday, October 18th. The annual reports of the officers showed the society to be in a very prosperous condition. It is particularly noticeable that the society showed more interest in various civic problems

than ever before. Miss Alice M. Crane of Ann Arbor addressed the society on "The Separate the nurses standpoint. Dr. A. W. Crane of Kalamazoo spoke on "The Diagnostic Field of the X-ray in Appendicitis." The lecture was copiously illustrated by lantern slides, and proved the retiring secretary for his work of the last three years. A vote of thanks was tendered for 1922-23.

President, Carl Chapel.

Vice President, W. H. Winchester.

Secretary, Max Burnell.

Medicolegal Officer, F. B. Miner.

Directors, N. Bates, C. H. O'Neil, H. E. Randall, J. G. R. Manwaring, B. E. Burnell.

Delegates to the State Society, J. C. Benson, C. Moll.

Alternates Delegates, D. D. Knapp, W. H. Winchester.

W. H. MARSHALL,
Secretary.

HILLSDALE COUNTY

The regular quarterly meeting of the Hillsdale County Medical Society, was held at the court house, Hillsdale, Tuesday, October 10, at 7:30 p. m., the president, Dr. Hanke, in the chair.

Dr. Charles W. Hitchcock of Detroit, favored the society with an interesting and instructive paper, "Some Practical Lessons from Psychiatric Cases," from the case notes of the author. He called especial attention to the danger of trusting patients suffering from melancholic dementia for a moment, no matter how earnest their promises of good behavior. The paper was discussed by Dr. Sawyer and others and Dr. Hitchcock answered a number of questions by Doctors Green, Sawyer, Barnes and others.

The society then listened to a charming paper by Dr. Jas. M. Barnes of Waldron, "The Physician or Doctor," which was a forceful plea for a re-establishment between the doctors of today and their patrons of the old-time relationship and a depreciation of the commercial spirit that seems to be creeping into certain portions of the profession. Also the danger of trying to be too much of a "good fellow" with the "bunch," and the importance of the doctor spending his spare time in trying to learn more about his profession instead of in the pool room or hotel lobby.

The discussion of this paper was general and it was greatly appreciated.

Adjourned until the annual meeting.

D. W. FENTON,
Secretary-Treasurer.

MONROE COUNTY

The Monroe County Medical Society held their fall meeting at the Monroe club, Tuesday afternoon, October 17, at 2:00 p. m.

The main business of the afternoon was the election of officers for the coming year. Those elected were: President, Dr. J. J. Siffin, Monroe; Vice President, Dr. S. U. Dussean, Erie; Secretary-Treasurer, Dr. H. W. Sandon, Monroe; Corresponding Secretary to State Journal, Dr. F. C. Thiede, Monroe; Member Medicine Defense Committee, Dr. C. T. Southworth, Monroe; Dele-

gate to State Convention, Dr. J. A. Humphrey, Monroe; Alternate, Dr. W. F. Acken, Monroe; Program Committee for year, Drs. A. W. Karch, W. F. Acken, and H. W. London, Monroe.

One new member was voted in the society, Dr. C. J. Golinvaux, who has recently located in Monroe.

We also had a very interesting paper and lantern slide demonstration of X-ray plates, showing numerous fractures and their complications, by Dr. A. M. Unger of Toledo, Ohio.

It was decided to continue the regular monthly meeting and luncheon at the Park Hotel, the coming winter. They will be held every third Tuesday of the month and the program committee, Drs. Karch, Acken and Landon promising us some very interesting papers for the coming year. Last year we had some very good meetings and the attendance was fair, but this year we want even better. All members are urged to appoint themselves as a committee of one and attend every meeting this coming winter, it is only one day a month and we are sure you can tear yourself away for one afternoon. We promise you the "eats" will be as good as ever. Remember they start at 12 noon, the third Tuesday of each month, you will be notified by card.

The following members were present at this meeting: Doctors Acken, Siffin, Southworth, Miller, Hathaway, Karch, Thiede, Humphrey, Landon and Golinvaux, all of Monroe and Dr. S. V. Dussean of Erie and Dr. O. M. Unger of Toledo.

ACADEMY OF SURGERY OF DETROIT

The regular meeting of the Academy of Surgery of Detroit was held at the office of Dr. Max Ballin, 269 Rowena street, Friday evening, Oct. 13, at 8 o'clock.

The program for the evening was as follows:

- 1—Gastric Fibroma Meningocele....Dr. N. M. Allen
- 2—Syphilis of the Stomach.....
.....Drs. R. C. Moehlig and E. G. Minor
- 3—Blood Counts in Goitre.....Dr. David Kallman
- 4—Anterior Abdominal Tenderness in Sacro-Iliac Strain.....Dr. H. C. Saltzstein
- 5—Remarks of Interest to the Society..Dr. M. Ballin

DR. MAX BALLIN,

President.

WYMAN W. BARRETT,
Secretary.

OFFICIAL MINUTES OF THE JOINT COMMITTEE ON PUBLIC EDUCATION. OCTOBER 9, 1922

The meeting of the Joint Committee on Public Education was held in the Michigan Union at Ann Arbor at 12:00 p. m., October 9, 1922. President Burton presiding and the following members present: Burton, Kay, Olin, Cabot, McCracken, Sundwall, Dodge, Henderson, Storey, Frothingham, Huber, Biddle and Warnshuis.

The minutes of the last meeting were approved as read.

Professor Henderson, chairman of the sub-committee on speakers and topics reported that 10,000 copies of the University Bulletin had been printed. That 8,000 copies had been given state-wide dis-

tribution. That twenty-five lectures had been given and that since the opening of the University for its 1922-23 session, 36 requests had been received for speakers. He further reported that these requests were coming in rapidly and that the extension committee was arranging for a large number of meetings to be held during the fall and winter months.

Dr. Storey, Chairman of the Committee on Public Education of the Wayne County Medical Society, addressed the committee regarding the plans of the committee of Wayne County. The committee engaged in a discussion of plans of co-operation with the Wayne County Committee and it was moved by Dr. Olin, supported by Dr. Dodge, that the chairman of our committee on Topics and Speakers co-operate with Dr. Storey in planning the meetings for Detroit and that a close liaison be maintained by our committee on Speakers and Topics with Dr. Storey so that there would be no duplication of the lectures or conflict with the work that is being done by the two committees.

It was moved by Dr. Dodge and supported by Dr. McCracken that the Committee of Wayne County nominate ten names from Detroit for our Speakers' Bulletin and that these men be available for lectures throughout the state.

Because of removal from the state or for other reasons, the Committee on Speakers and Topics was directed to remove from the Speakers list the following names: Harriet Leck, C. W. Edmunds, Professor Warthin.

On motion of Dr. Dodge, supported by Dr. Cabot, it was moved that the Chairman of the Committee on Speakers and Topics eliminate the names of lay speakers unless said lay speakers understand that they are to pay their own expenses, since the committee has no funds for this purpose. That their names may be retained upon the list if these speakers understand that they are to pay their own expenses.

Upon motion of Dr. Dodge, supported by Dr. Huber, it was moved that the name of every member of the Joint Committee be added to the list of speakers and that they be requested to submit the topics of their lectures.

Moved by Dr. Biddle, supported by Dr. Dodge that Dr. Henderson communicate with the listed speakers and secure from them a new acceptance and the topic of their lectures. Further, that Dr. Henderson ask Dr. Storey, Chairman of the Wayne County Committee to submit an amended list of speakers. Carried.

Moved by Dr. Biddle and supported by Dr. Kay that the Sub-Committee on Speakers and Topics be authorized to select speakers in counties that have not submitted lists of speakers. Carried.

Moved by Dr. Biddle, supported by Dr. Kay, that the Deans of the Medical Schools be authorized to submit supplemental lists of speakers. Carried.

Moved by Dr. Frothingham, supported by Dr. Sundwall that letter heads be authorized. That said letter heads should contain the slogan of the committee, names of the members of the Joint Committee and in addition directing that correspondence regarding lecture engagements be sent to Dr. Henderson and correspondence regarding the general activity of the committee be sent to Dr. Warnshuis.

On motion of Dr. Dodge, supported by Dr. Cabot, the matter of establishing a course of lec-

tures in the colleges of Michigan for the benefit of the students attending these colleges was referred to President Burton for investigation and recommendation.

Upon motion of Dr. Cabot, supported by Dr. Dodge, the special committee on Speakers and Topics was authorized to compile and issue a second edition of the Bulletin for state-wide distribution.

Upon motion of Dr. Huber, supported by Dr. Kay, the Committee on Speakers and Topics was authorized to aid the State Commissioner of Health to the extent of supplying his department with speakers at the roundup meetings of the public health weeks that the department is conducting throughout the state.

Upon motion of Dr. Dodge, supported by Dr. Cabot, the meeting adjourned to meet in Ann Arbor at 12 noon, January 16, 1923.

F. C. WARNSHUIS,
Secretary.

Book Reviews

OPHTHALMOSCOPY, RETINOSCOPY AND REFRACTION. W. A. Fisher, M. D., F. A. C. S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Cloth, 217 pp. 248 illustrations. Published by author, 31 N. State St., Chicago, Ill.

Ophthalmoscopy is generally considered as a difficult subject. It is one that is not taught either practically or successfully in medical colleges, with the result that scarcely two per cent of practitioners coming to the author for post-graduate teaching know how to use the ophthalmoscope.

In the author's opinion ophthalmoscopy and the fitting of glasses belong to the general practitioner, and acquirement of the necessary practical and theoretical knowledge is easy, interesting and within the reach of all.

This book has been written with the intention of teaching medical practitioners and students the practical use of the ophthalmoscope and retinoscope, with easy application of methods of study, to the detection of diseases of the interior of the eye, and for the fitting of glasses when they are indicated.

By mastering the methods here described and equipping himself with the necessary instruments, there is no reason why the general practitioner should not prescribe so as to correct the common errors of refraction and become proficient in the use of the ophthalmoscope.

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